Defense Support of Civil Authorities (DSCA)

Applying the Lessons of Hurricane Katrina



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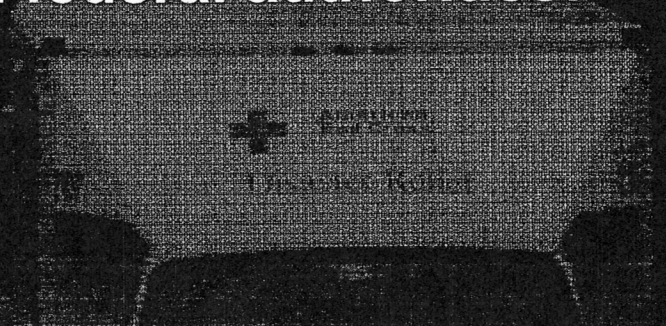
National Response to Catastrophic Events

- Katrina in Context
- Catastrophic Incident Response
- Closing the Gap

29 August 2005

The damage caused by Hurricane Katrina and the levee breaks in New Orleans presented the nation with a catastrophe for which it was unprepared.

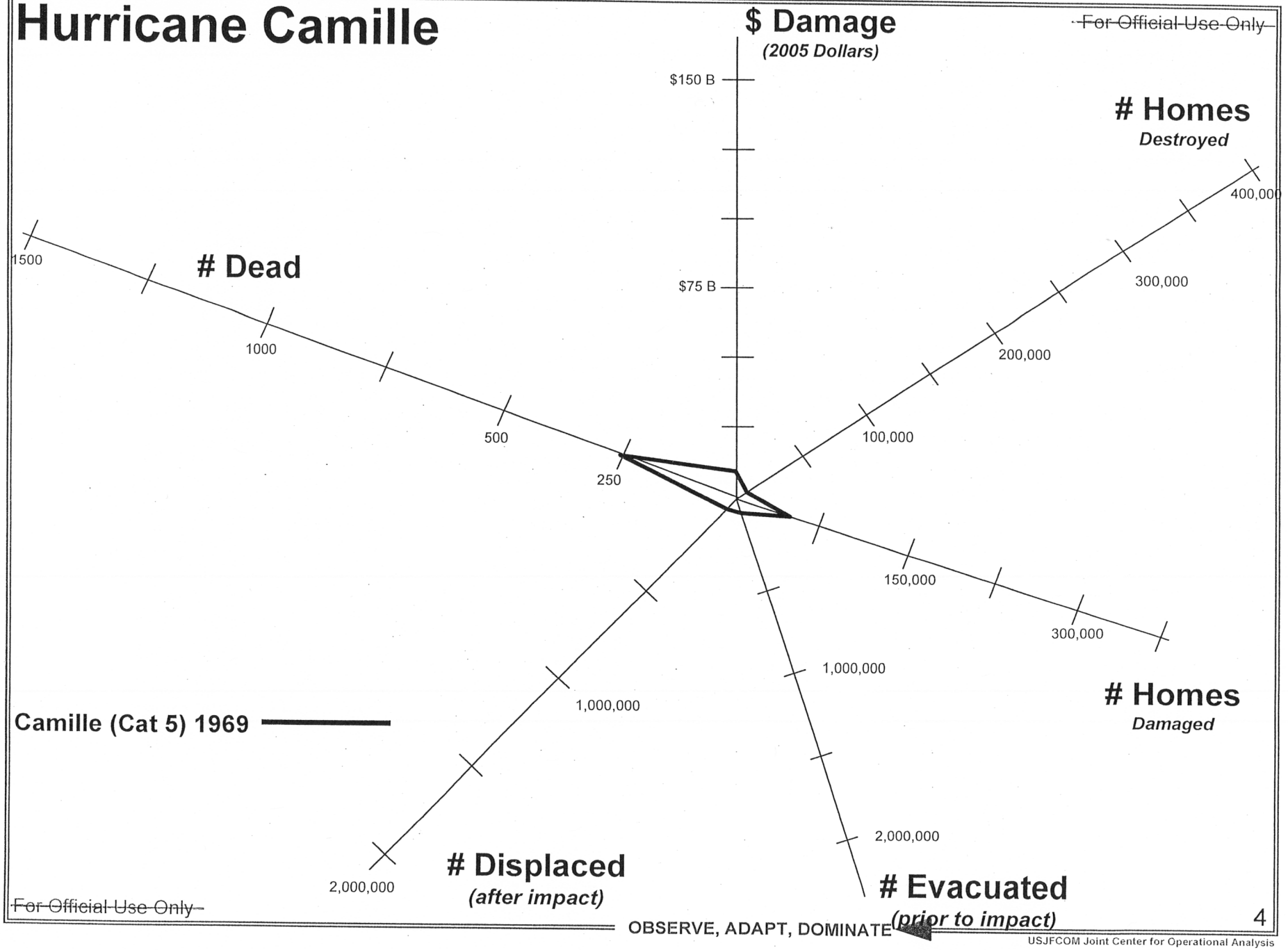
When the first responders became overwhelmed, the local, state and federal authorities:



- Did not understand what was happening
- Did not initially share critical information
- Did not quickly organize the response effort
- Did not always take needed initiative
- Did not work effectively with the media to get the facts to the people

Hurricane Camille

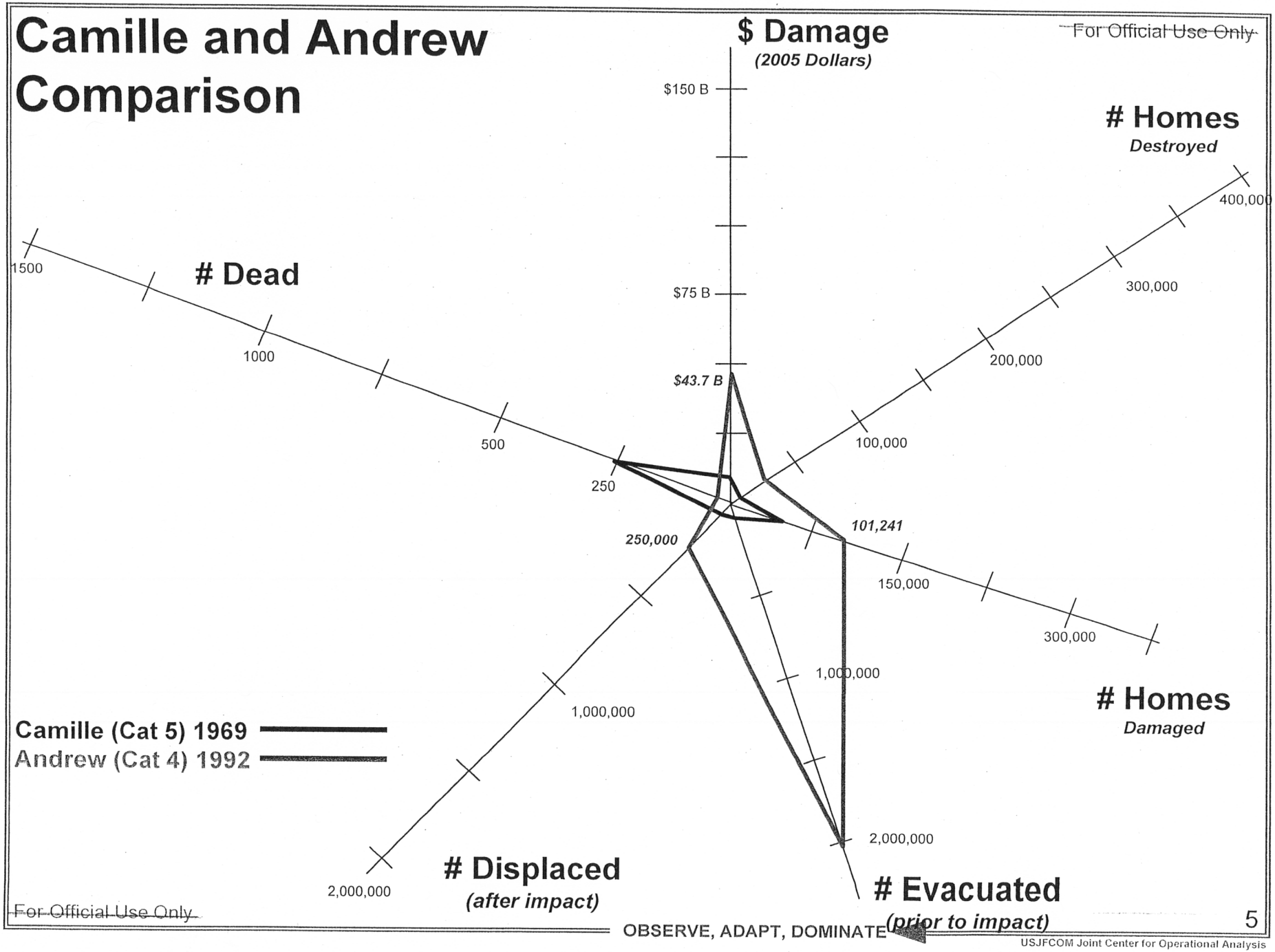
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Camille and Andrew Comparison

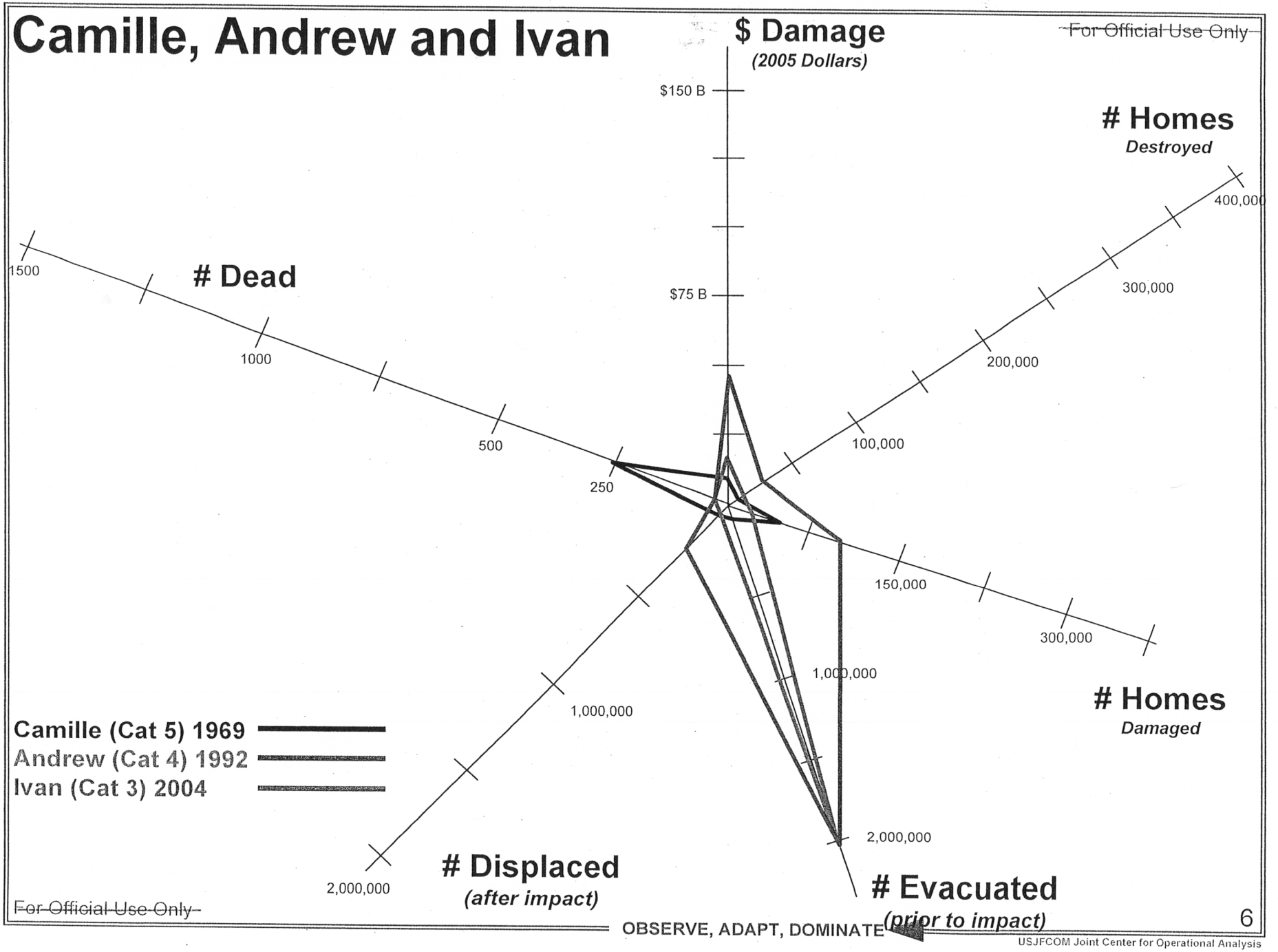
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Camille, Andrew and Ivan

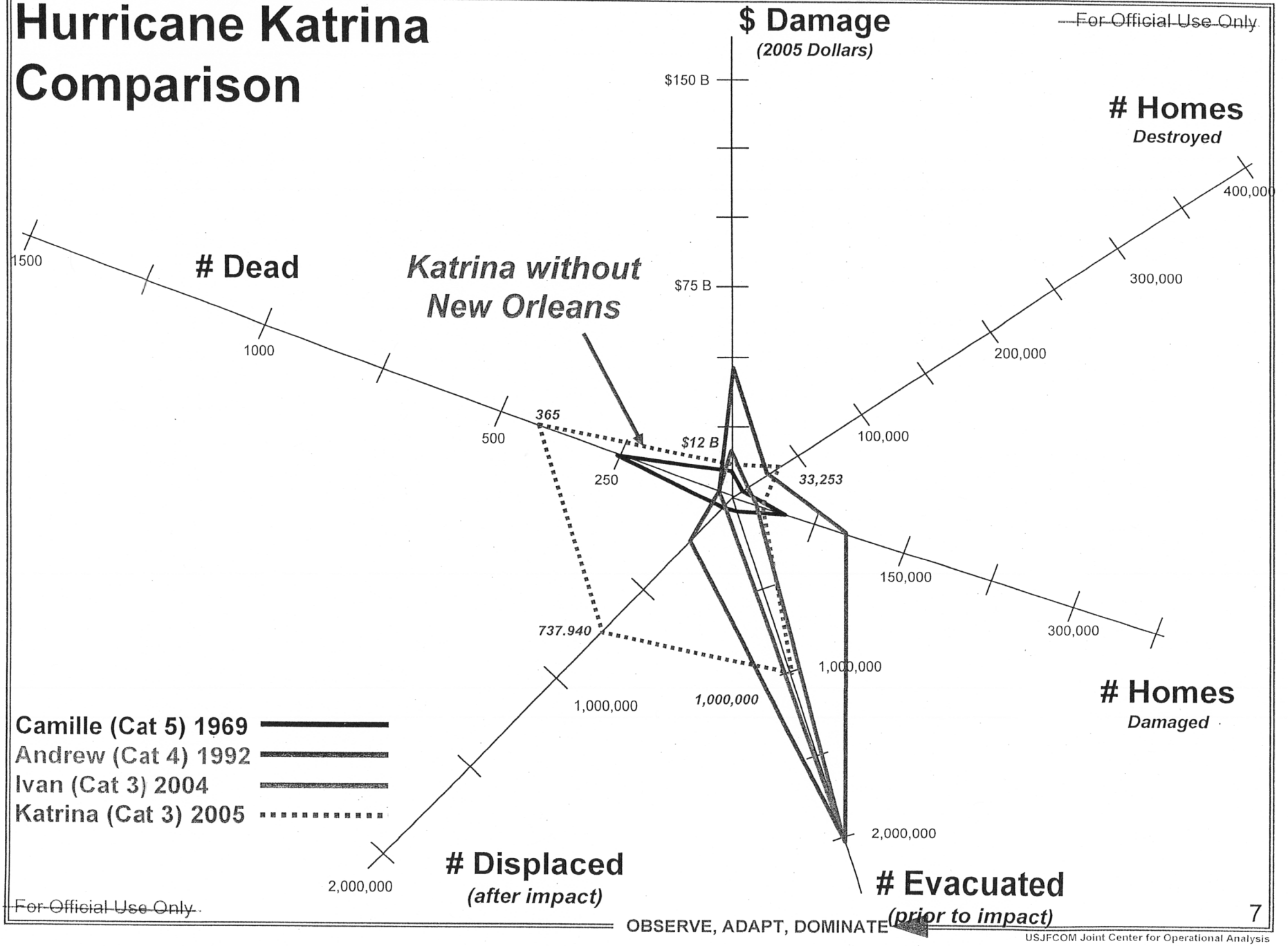
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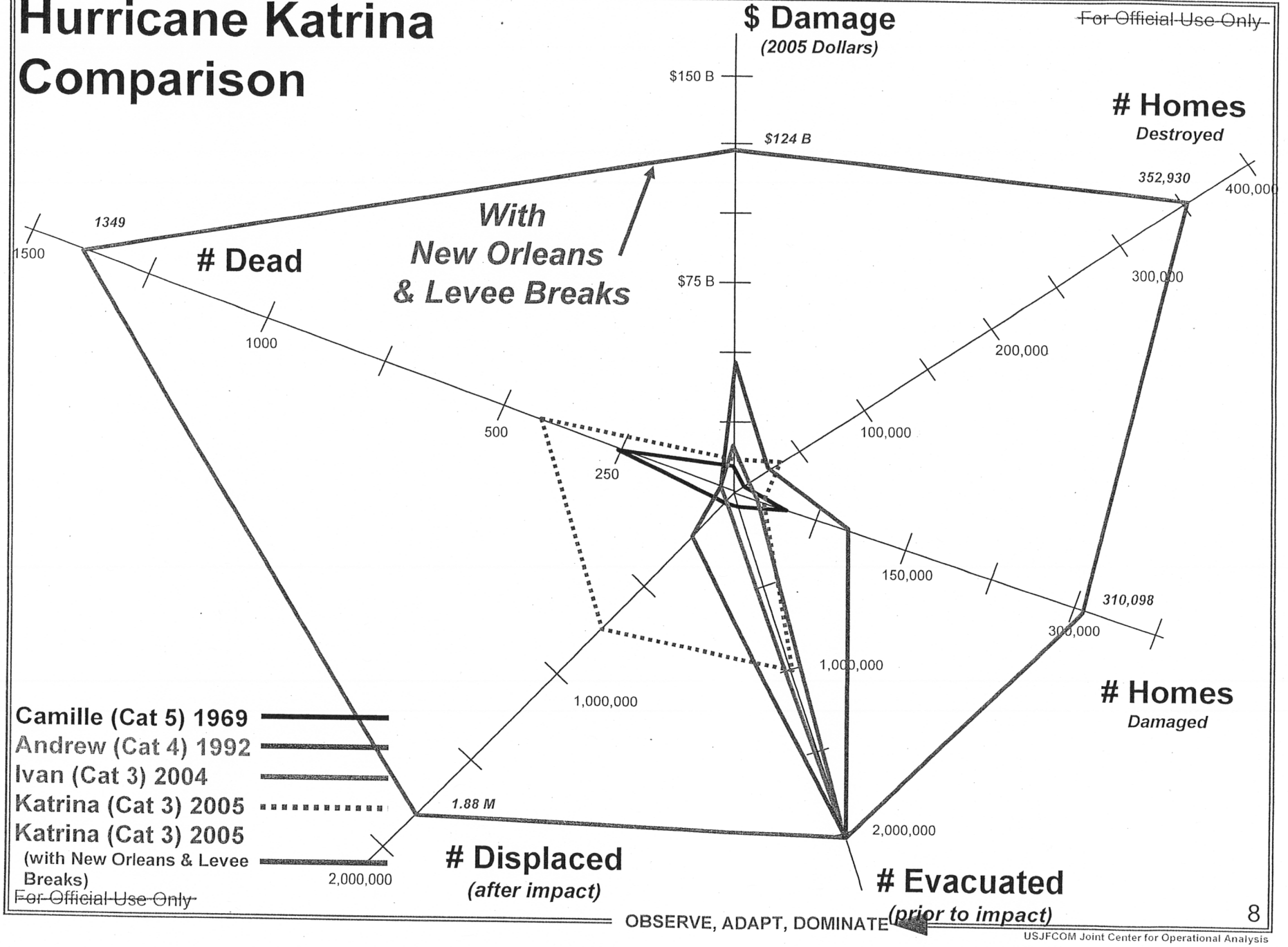
Hurricane Katrina Comparison

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Hurricane Katrina Comparison

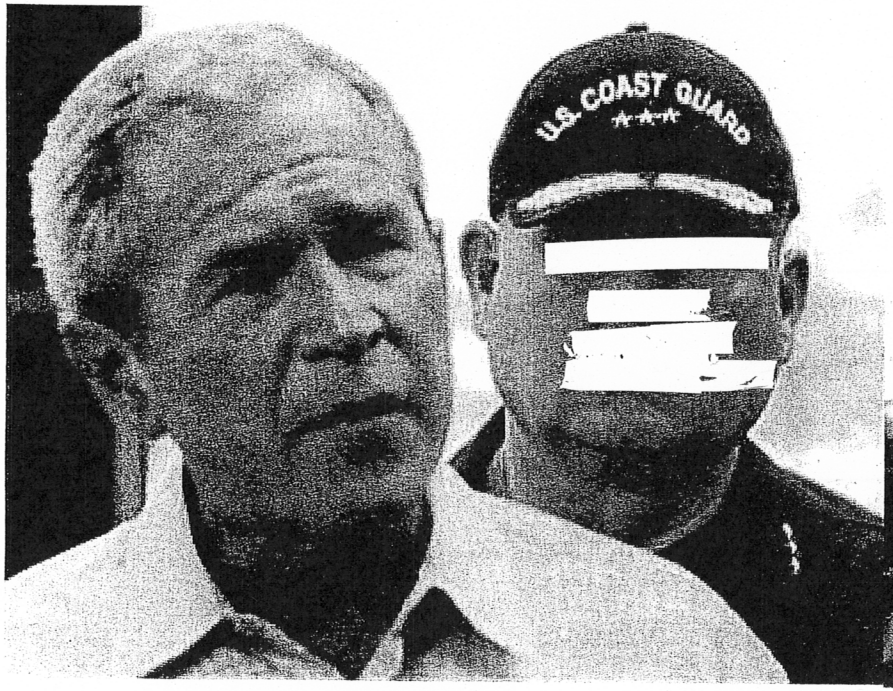


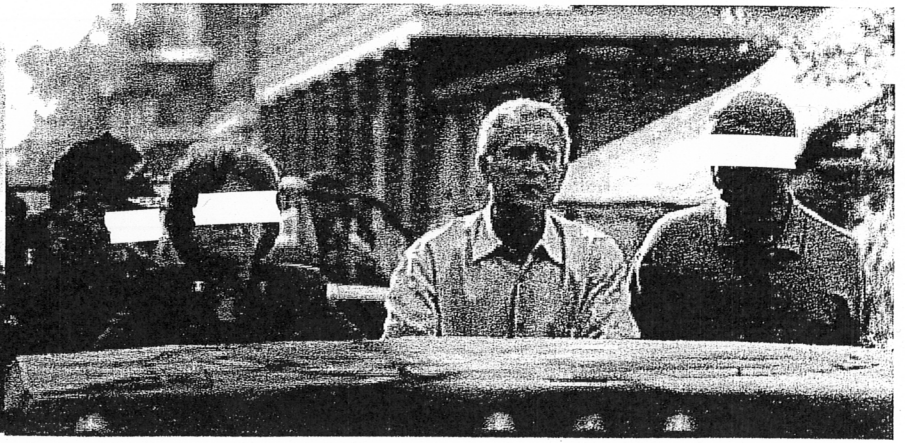
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" … It's important for the people of this country to understand that all of us want to learn lessons. If there were to be a biological attack of some kind, we've got to make sure we understand the lessons learned to be able to deal with catastrophe."

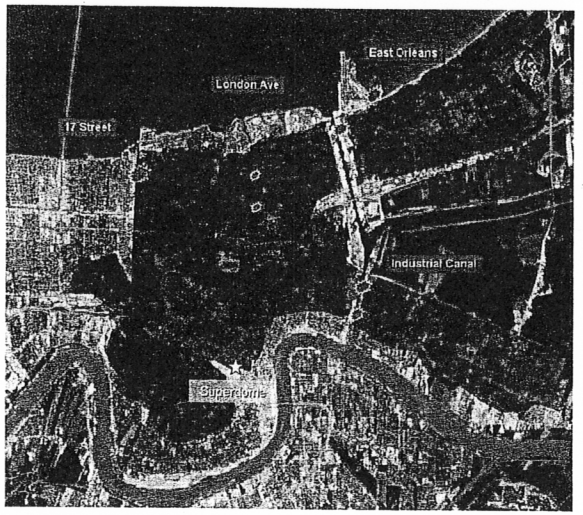
- President Bush
12 Sep 2005
New Orleans

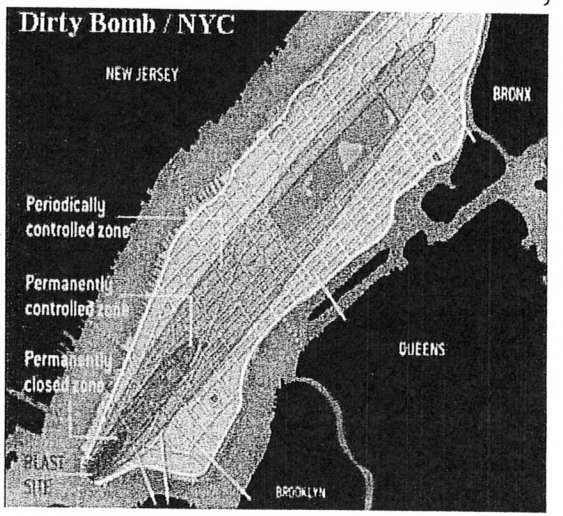


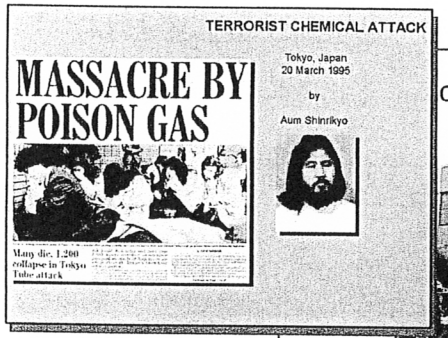


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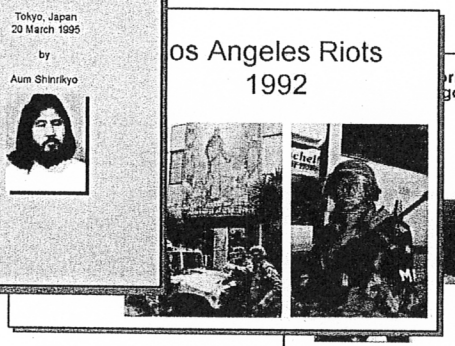
Past As Prologue: Applying Lessons From A Catastrophic Event







Sarin Attack
Tokyo



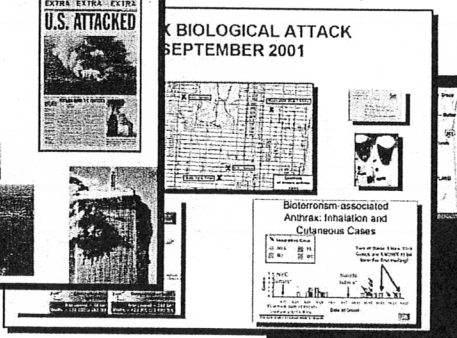
Riots
Los Angeles



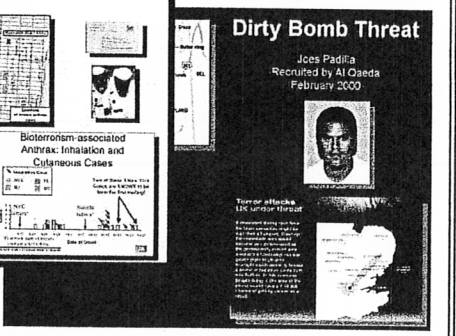
9-11
New York City



9-11
Washington
DC

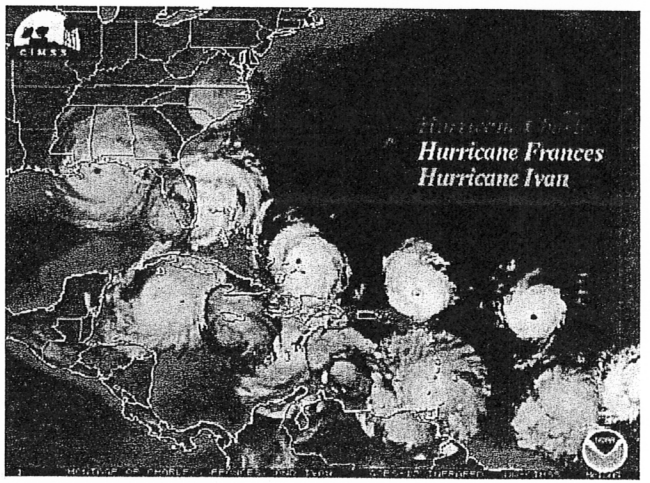


Anthrax,
Various



Jose Padilla
(Unknown)

Past Observations That Framed Analytic Effort



- Hurricane Camille '69
- Hurricane Hugo '89
- San Francisco Earthquake '89
- Hurricane Andrew '92
- 9-11-01
- Hurricane Charley, Frances, Ivan, Jeanne '04
- Tsunami '04

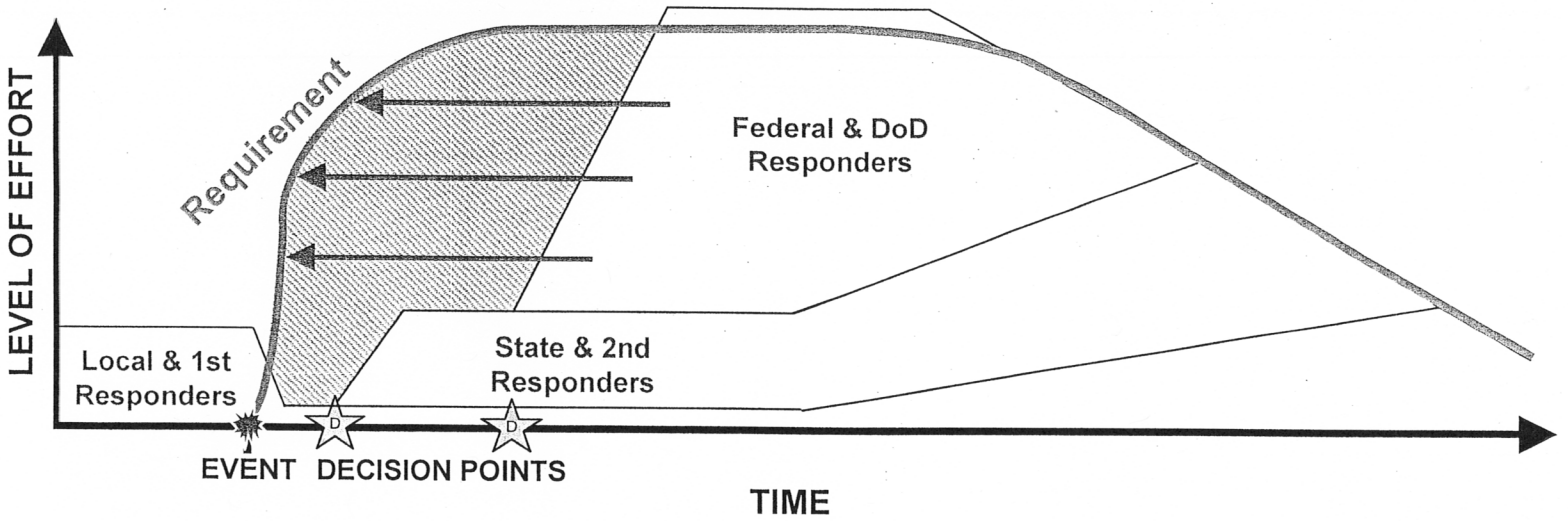
Hurricane Katrina / Levee Breaks were of a magnitude that we might expect from a major attack on US homeland, allowing evaluation of national consequence management efforts

Catastrophic Incident Response (circa August 2005)

Situation: Policy and law placed the federal government largely in a supplemental ("pull system") role for natural disasters

- – The levee breaks overwhelmed first responders and delayed assessment of damaged infrastructure
- – The National Response Plan was based on a sequential process–local, then state, then federal–that assumed the federal response was the last resort for major natural disasters
- – Federal assistance was keyed to a governor's specific request
- – The sequential process led to a culture of "wait until asked"

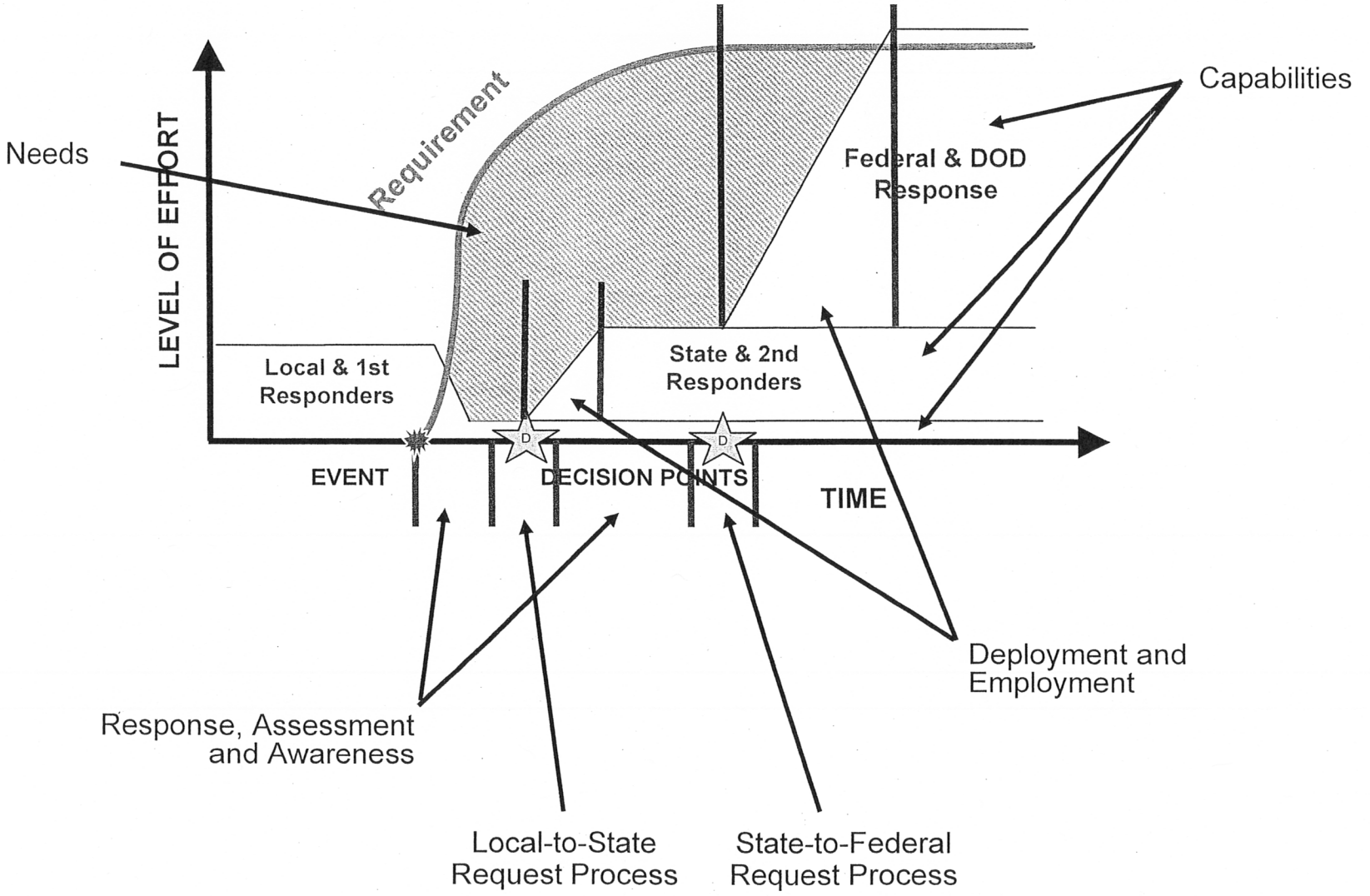
Response to a Catastrophe



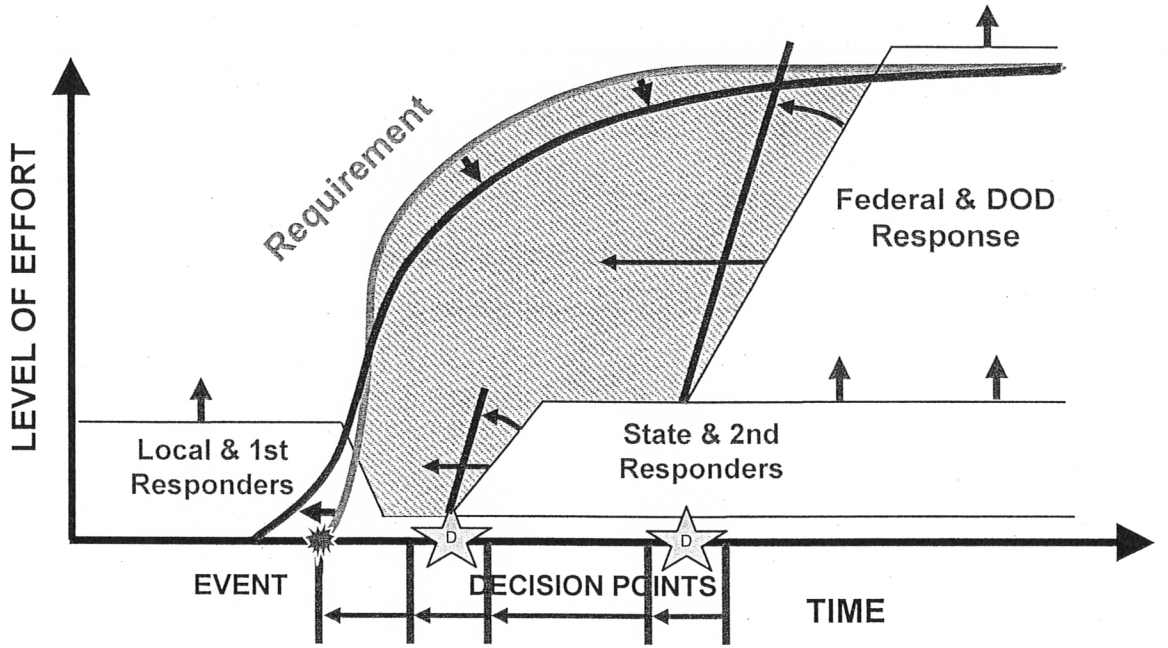
Challenges

- Situational Awareness
- Unity of Effort
- Policies
- Authorities
- Laws
- Resources
- "The Public"

Closing the Response Gap—Components

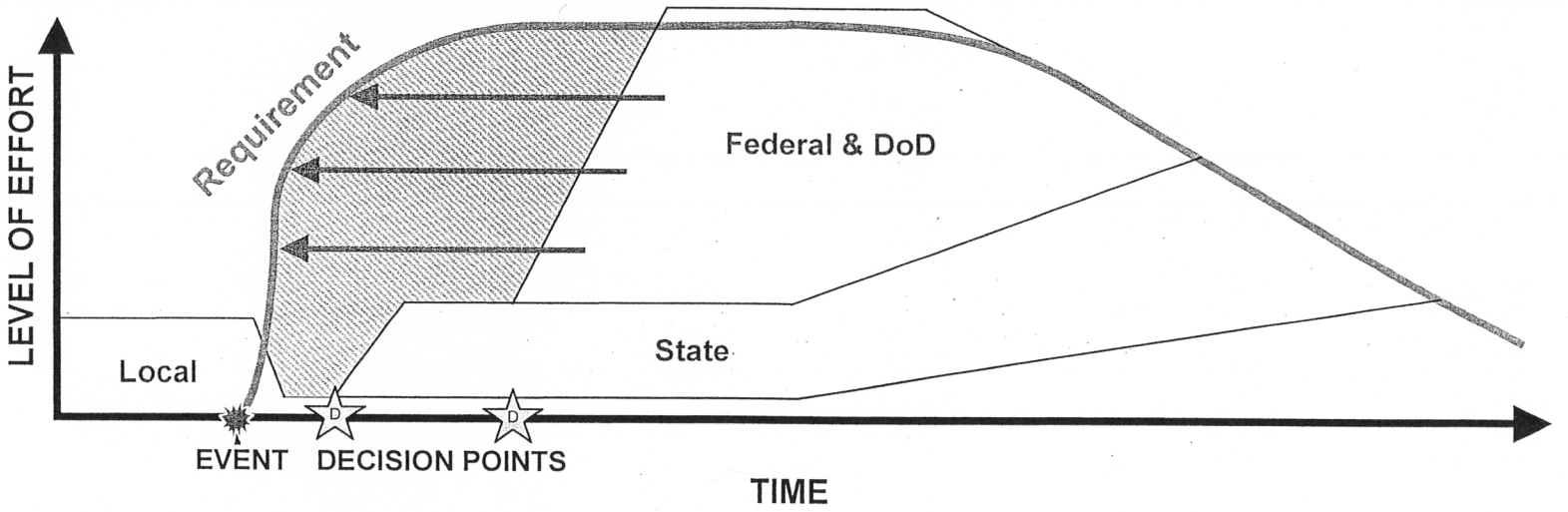


Closing the Response Gap—Approaches



Three basic approaches to improve the response:

- Accelerate decisions (decision points and processes)
- Alter capabilities (more and faster)
- Change the requirement (decrease need and early intervention)



How to Close the Gap …

- Establish Authorities and Unity of Effort
- Rapidly Respond
- Posture

Challenges

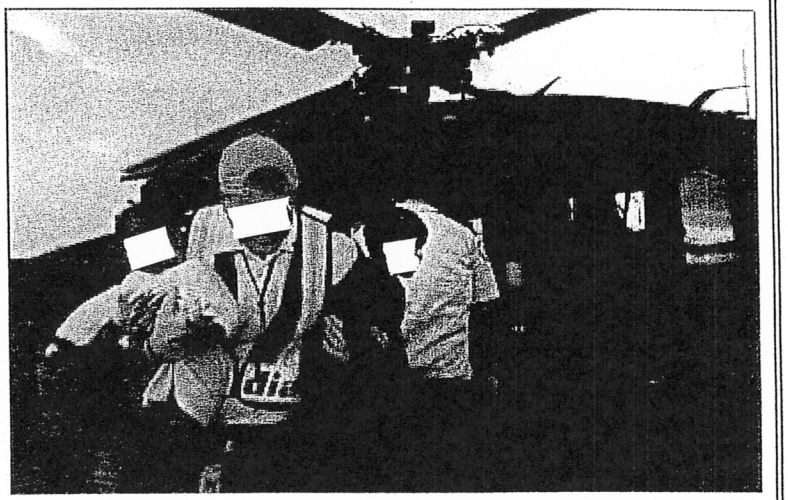
- Situational Awareness
- Unity of Effort
- Policies
- Authorities
- Laws
- Resources
- "The Public"

Timely Decisions

Closing the Response Gap

Establish Authorities and Unity of Effort

- Triggers for National Response
- Coordination, Command, Control, and Communications
- Incident and Resource Management
- NORTHCOM Authorities in a Catastrophic Disaster



(b)(6)

Rapidly Respond

- The Force Provider Process in a Domestic Crisis
- US Coast Guard, US Army Corps of Engineers, and the Military in Rapid Response
- Resource and Structure of States' National Guard

Posture

- Training and Exercises
- National Public Communication
- Incomplete Evacuation
- Initial Response in a Contaminated Environment
- Managing Offers of Foreign Aid

What has Changed since Katrina?

Establish Authorities and Unity of Effort

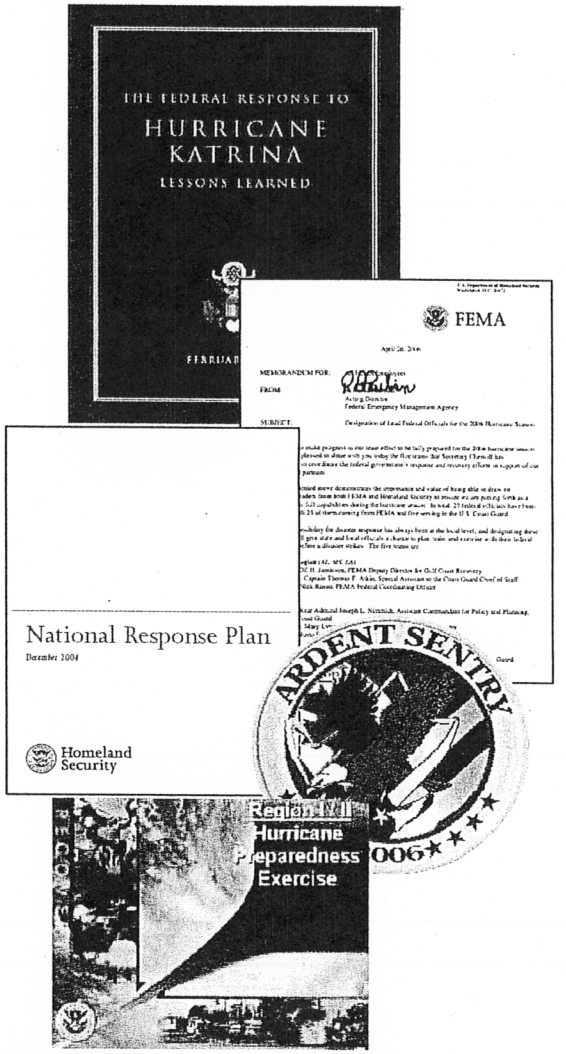
- ✓ Triggers for National Response
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Posture

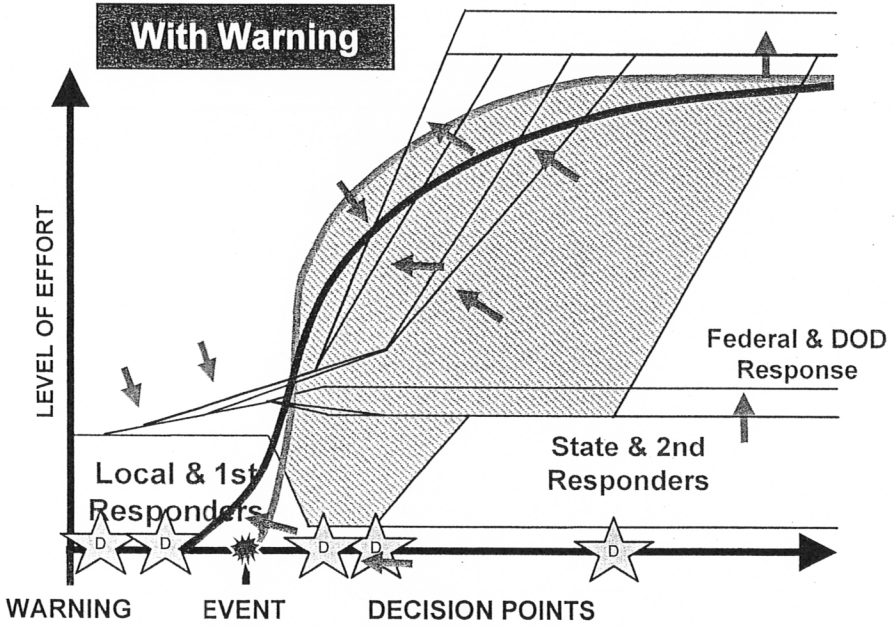
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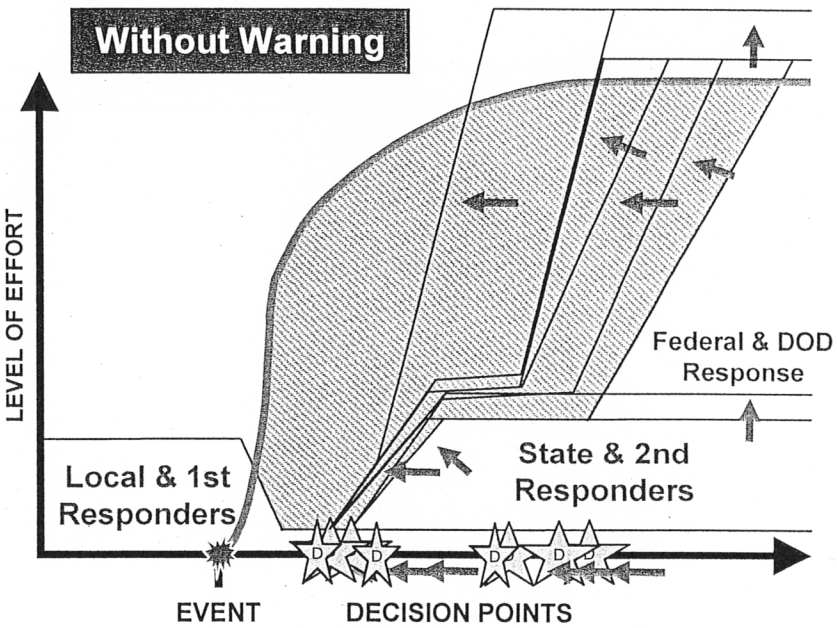


"All responses are local, but we no longer wait for local folks and the states to be overwhelmed before we step in."

R. David Paulison, FEMA Director, 30 Nov 06

Closing the Response Gap—Changes & Effects

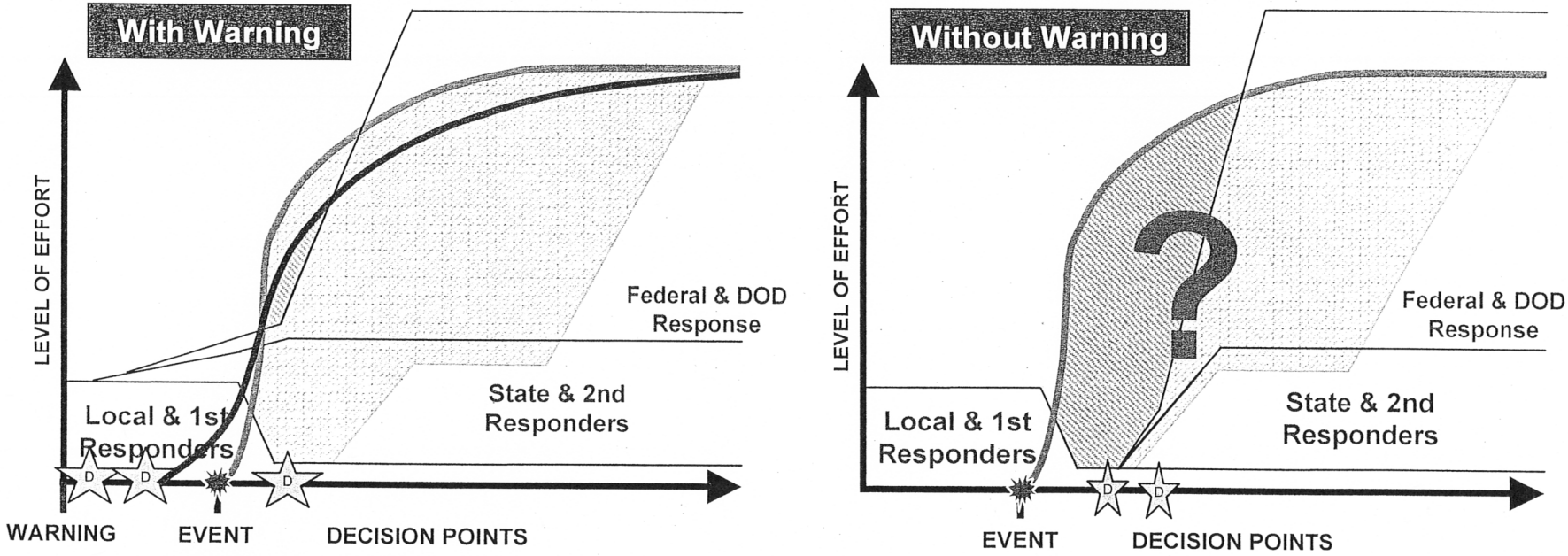




Observations and Impact:

- – Framework: incident management, C2 structures fundamentally unchanged
- – Triggers: Catastrophic Incident Annex, "early declaration" policy clarified
- – Authorities: expanded for Principal Federal Official, Combatant Commander
- – Sit Awareness: Incident Awareness and Assessment changes, pre-event surveys
- – Coord/Comms: regional coordination improved, communications mixed
- – Resources: more commodities, increased logistics planning, processes streamlined
- – Preparedness: increased awareness; emphasis on Gulf/East Coast disaster planning
- – Recent change: Insurrection Act revision (Oct 06)

Closing the Response Gap—Changes & Effects



Open Issues:

- Have these changes been institutionalized? Are they repeatable?
- Is this level of preparedness sustainable?
- Several items still require attention
  - Situational awareness and shared knowledge for decisions
  - Interoperable communications
  - National "force provider" process
  - Intergovernmental planning/coordination (pre/post-disaster)
  - Intergovernmental training and exercise, strategic through tactical

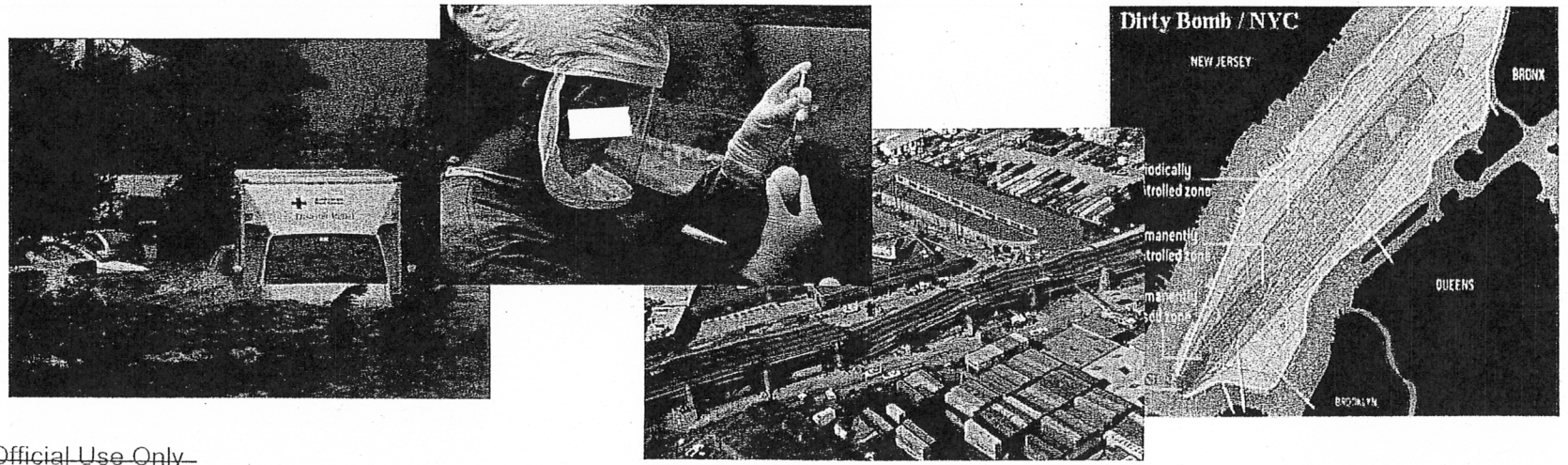
Conclusions—Closing the Response Gap

Hurricane Katrina revealed many shortcomings in national planning, preparedness, and response capabilities.

Governments at all levels, the private sector, and non-governmental organizations are taking corrective actions within their spheres of influence.

Although public expectations of a response effort may be very hard to meet, capabilities for a near-term, Katrina-like event have improved. A larger gap still remains for events "without warning."

The onus for ensuring effective response falls mainly on local and state governments and civilian federal agencies. While most disaster needs are not uniquely military, uniformed services provide a powerful, visible response capability and will remain a key piece of a National response.



(b)(6)

Defense Support of Civil Authorities (DSCA)

Applying the Lessons of Hurricane Katrina

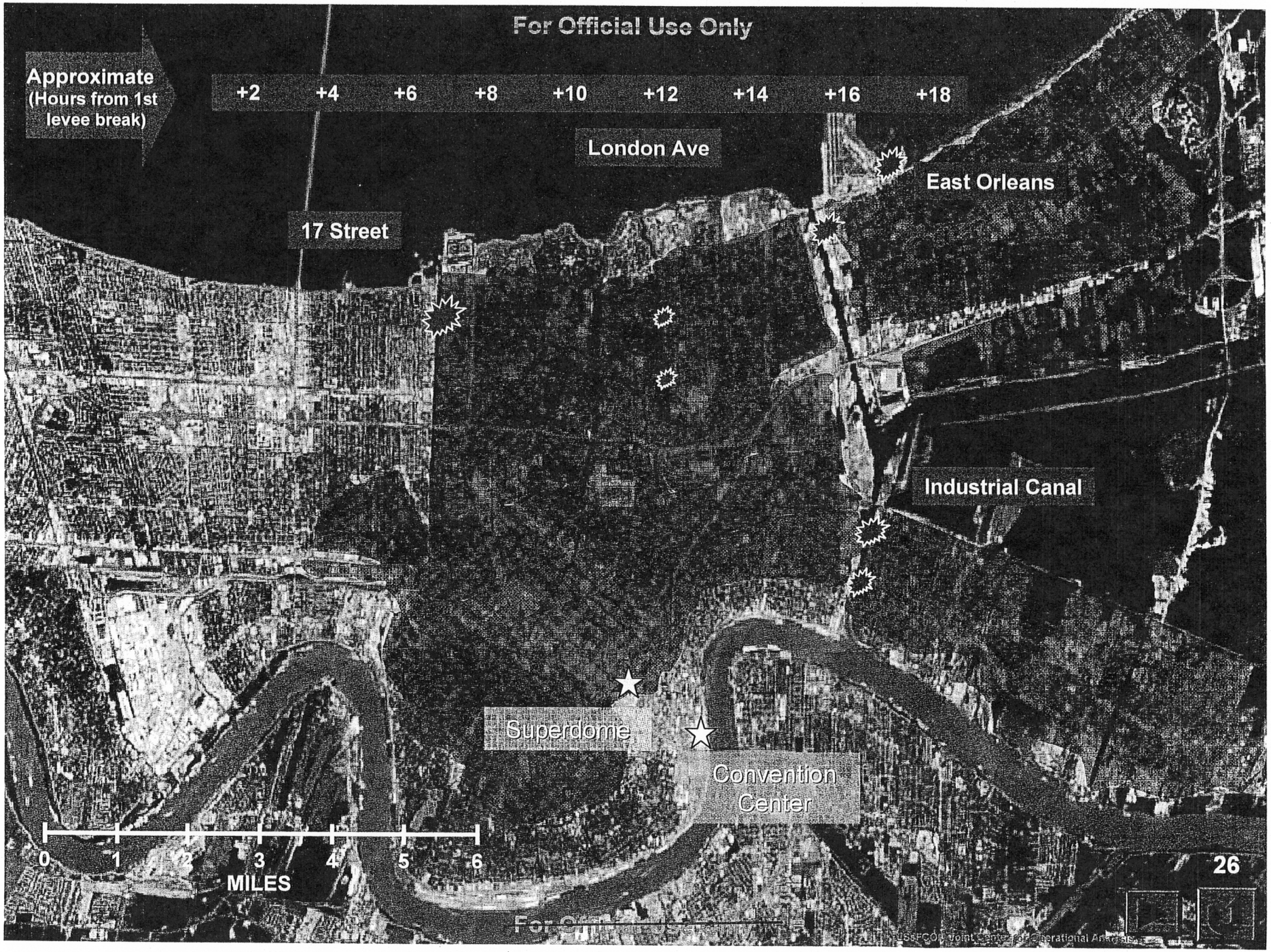


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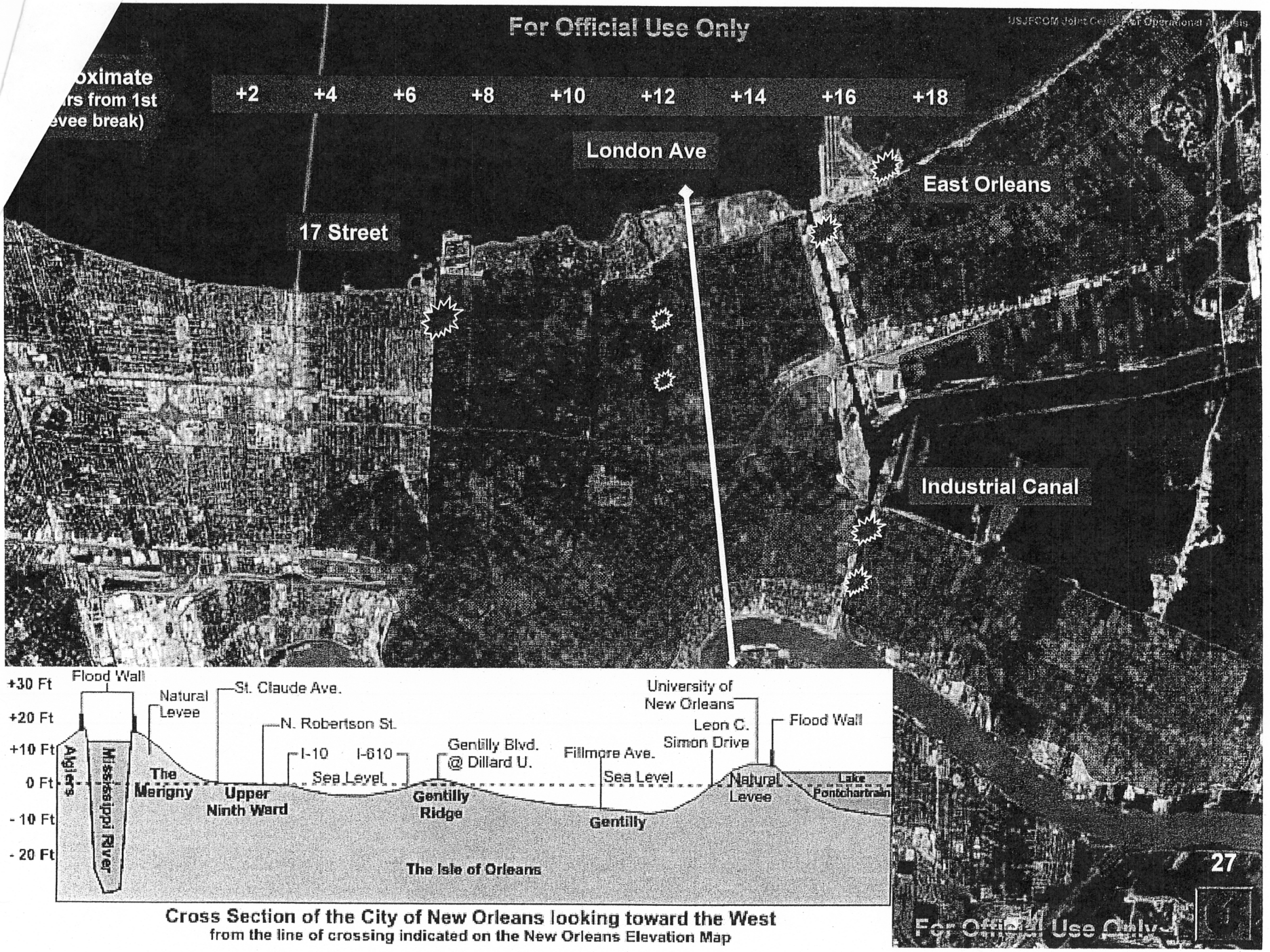
Drilldown Slides

	Camille	Andrew	Ivan	Katrina (New Orleans)	Katrina
Displaced	15,000	250,000	>10,000	1,150,000	1,887,940
Evacuated	81,000	1.5-2.3M	2.0M	1.04M	2.04M
Damage	$8.9B	$43.7B	$14.2B	$76.8 - 112B	$85-124B
Dwellings Destroyed	6,744	25,524	8,922	319,677	352,930
Dwellings Damaged	48,763	101,241	18,850	280,880	310,098
Dead	250	26	25	984	1,349

	Camille	Andrew	Ivan	Katrina New Orleans	Katrina
Displaced	Michael Grammatico, Hurricane Camille, 6/03 (www.geocities.com/hurricanene/hurricanecamille.htm) S-8	University of Arizona--Nicole Dix (http://www.geo.arizona.edu/~ldix/g256/) S-1	Palm Beach Post (www.palmbeachpost.com/storm/content/weather/special/storm/2004/atlantic/ivan/news.html)S-13 Note: Includes only displaced with shelter in FL. Number rounded up to 10000	LA Geographic Information Center, 2005 LA Hurricane Impact Atlas Dec 16 05 (http://lagic.lsu.edu/hurricanes.htm) S-22	FEMA Report, as of Jan 4, 2006, "Reported Locations of Katrina/Rita applicants" S-18
Evacuated	1) Pielke, et al. (1999) Thirty Years After Hurricane Camille: Lessons Learned, Lessons Lost. Hurricane Camille Project Report. (http://sciencepolicy.colorado.edu/about_us/meet_us/roger_pielke/camille/report.html, S-9	Preliminary Report Hurricane Andrew 16 - 28 August, 1992, Ed Rappaport, National Hurricane Center S-2	Same as S-13, S-14	JCOA Analysis (New Orleans 80% with population of 1.3 M)	JCOA Analysis (New Orleans 80% with population of 1.3 M) and 40% of rest of Gulf Coast
Damage	2) Blake, et al. (2005) Costliest U.S. Hurricanes 1900-2004 (Adjusted), National Hurricane Center. (http://www.nhc.noaa.gov/pastcost2.shtml) S-3	S-3	S-3	JCOA Analysis of Data from S-23, TL Travis Total * Fraction in Spreadsheet S-25	(CBO Report 6 Oct) Douglas Holtz-Eakin, "Miacroeconomic and Budgetary Effects of Hurricanes Katrina) S-4
Dwellings Destroyed	Same as S-9, S-10	University of Arizona--Nicole Dix S-5	American Red Cross Stewardship Report Hurricane Season 2004 (http://www.redcross.org/sponsors/drf/h2004-stewardreport.html) S-15	Same as S-25 S-26	11) Hurricane Katrina: Social-Demographic Characteristics of Impacted Areas. (CRS 2005-11-04) S-23
Dwellings Damaged	Same as S-10, S-11	University of Arizona--Nicole Dix S-6	American Red Cross Stewardship Report Hurricane Season 2004 (http://www.redcross.org/sponsors/drf/h2004-stewardreport.html) S-16	Same as S-26, S-27	Same as S-23, S-24
Dead	Same as S-11, S-12	University of Arizona--Nicole Dix S-7	7) Stewart, Stacy R. (2005) Tropical Cyclone Report Hurricane Ivan 2 - 24 September 2004, National Hurricane Center. (http://www.nhc.noaa.gov/2004ivan.shtml) S-17	Department of Health and Hospitals(www.dhh.state.la.us/news.asp?D=787) S-21	Department of Health and Hospitals(www.dhh.state.la.us/news.asp?D=787) S-19 State of Mississippi Office of Vital Statistics Katrina Ops Center S-220

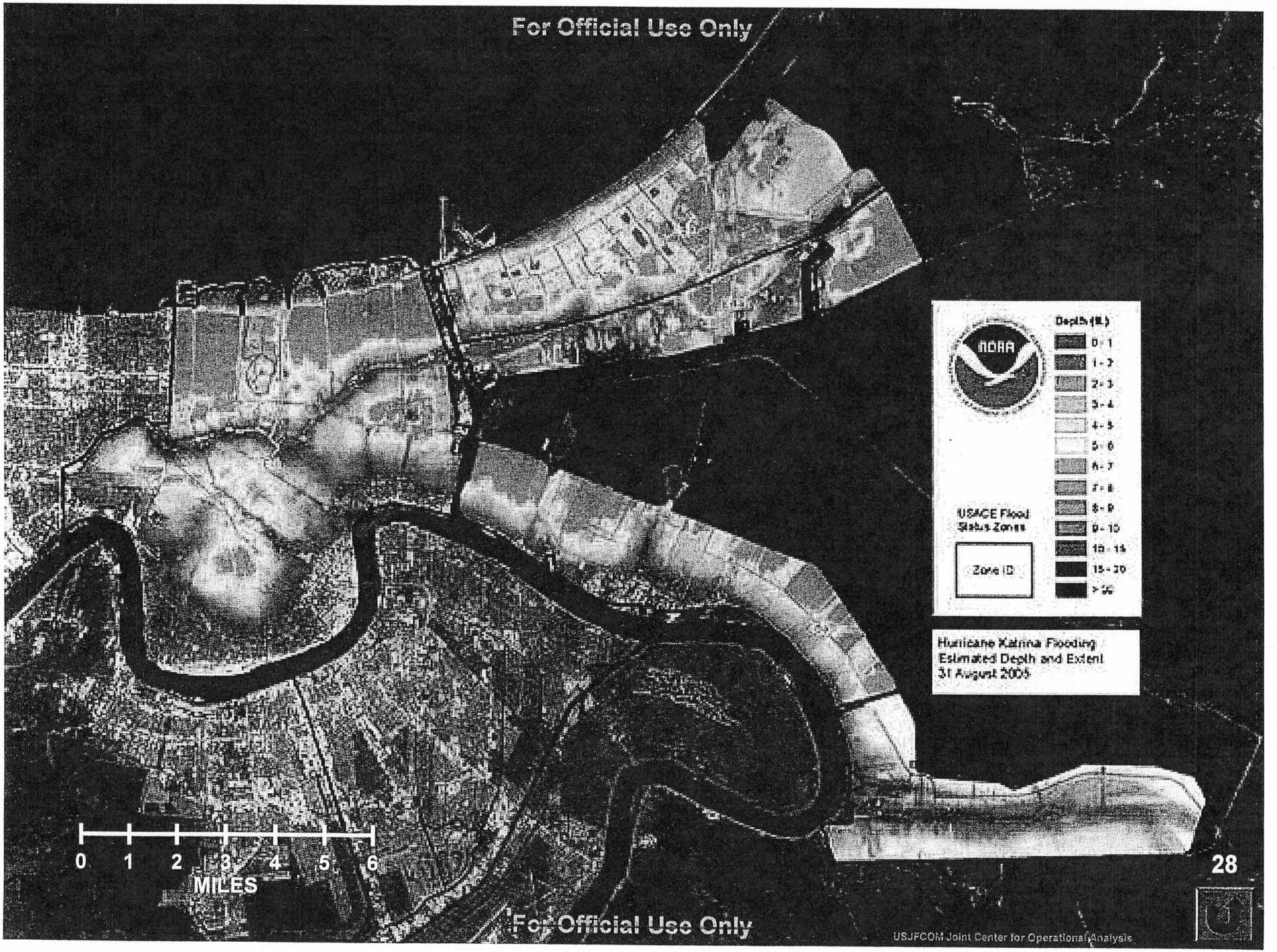

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Approximate
(Hours from 1st levee break)
+2
+4
+6
+8
+10
+12
+14
+16
+18
London Ave
East Orleans
17 Street
Industrial Canal
Superdome
Convention Center
0
1
2
3
4
5
6
MILES
26

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Cross Section of the City of New Orleans looking toward the West
from the line of crossing indicated on the New Orleans Elevation Map

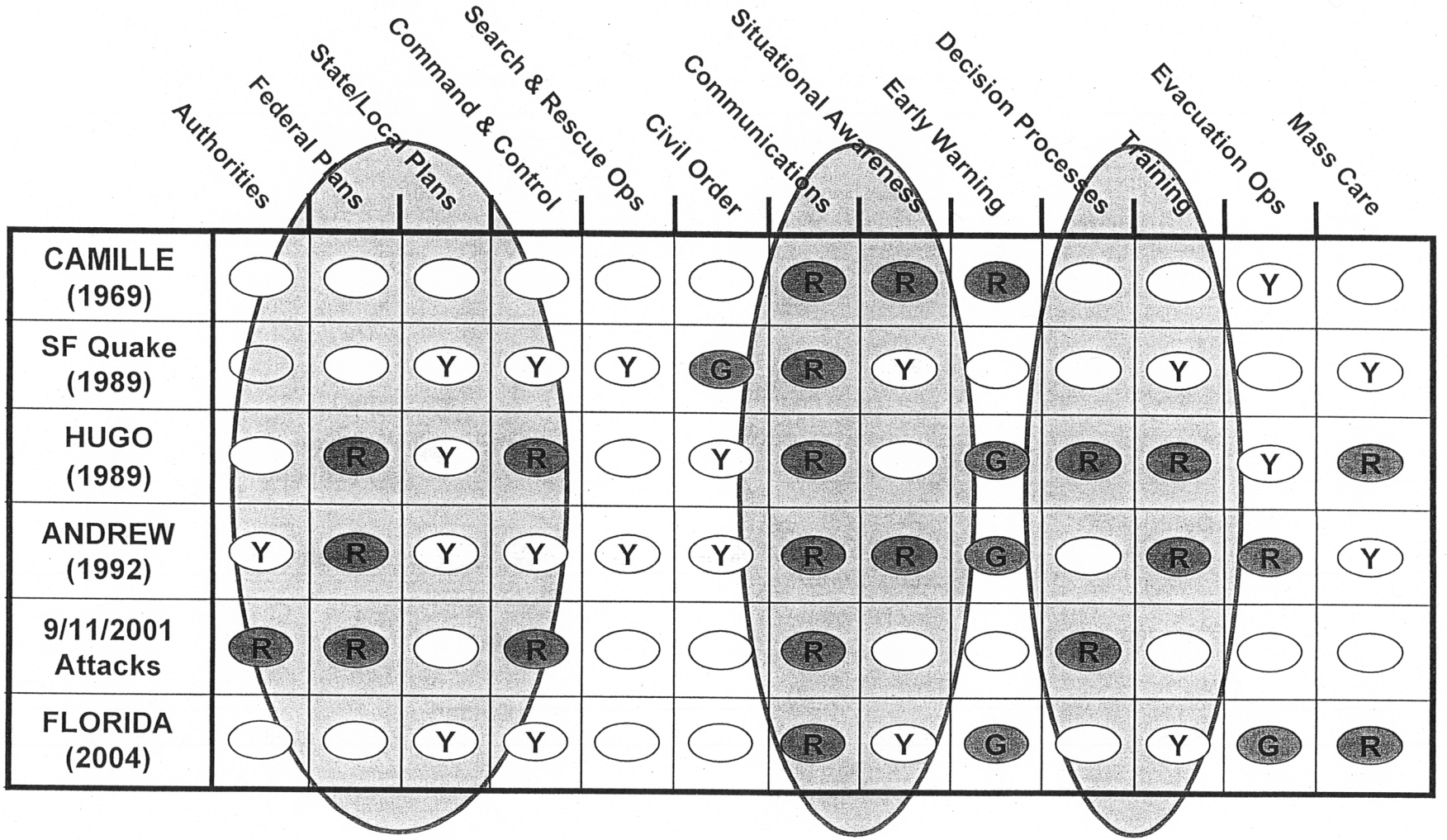
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Hurricane Katrina Flooding
Estimated Depth and Extent
31 August 2005

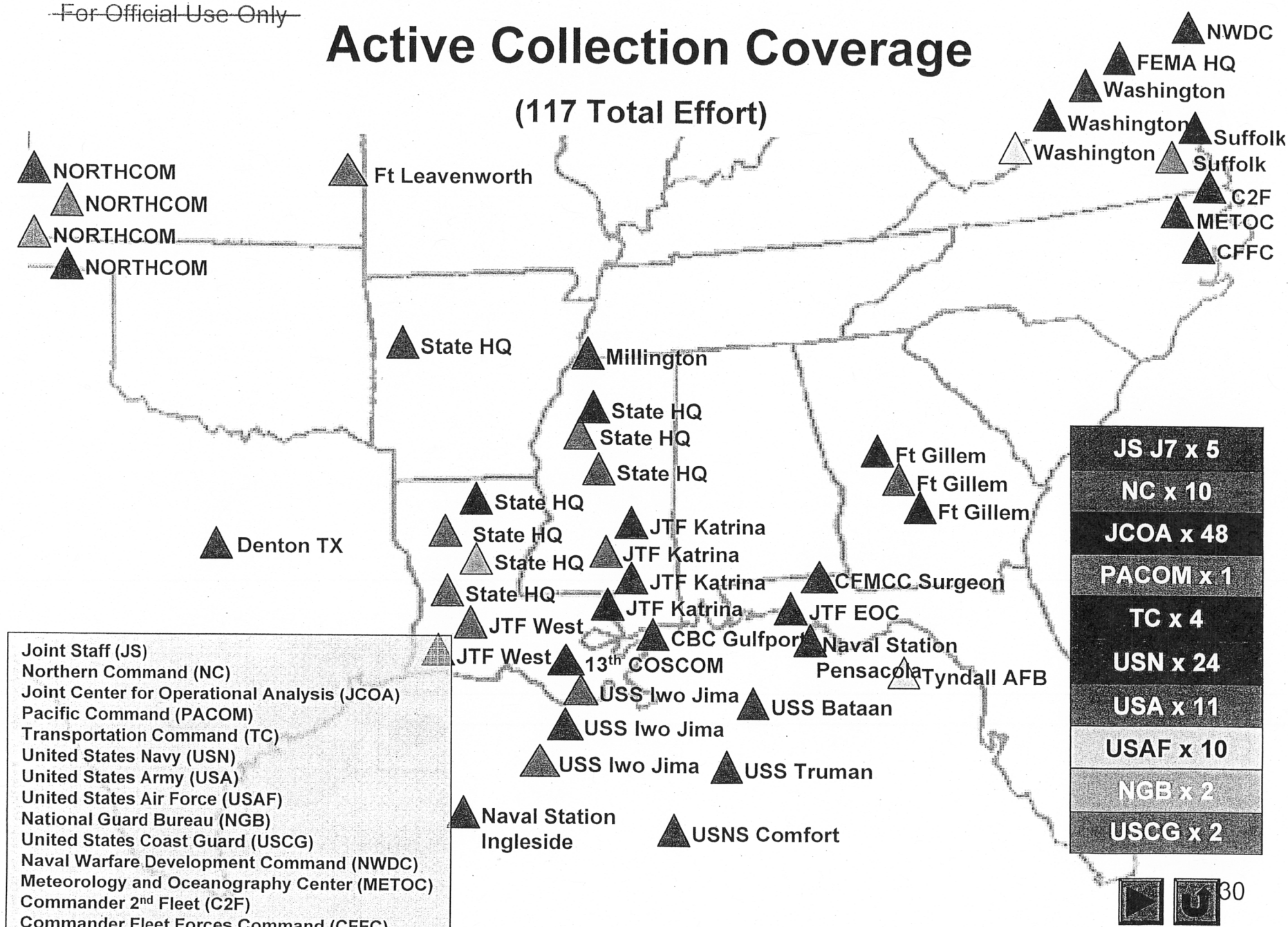
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2005 Review of Prior Events: What Stood Out



Active Collection Coverage

(117 Total Effort)



Joint Staff (JS)
Northern Command (NC)
Joint Center for Operational Analysis (JCOA)
Pacific Command (PACOM)
Transportation Command (TC)
United States Navy (USN)
United States Army (USA)
United States Air Force (USAF)
National Guard Bureau (NGB)
United States Coast Guard (USCG)
Naval Warfare Development Command (NWDC)
Meteorology and Oceanography Center (METOC)
Commander 2nd Fleet (C2F)
Commander Fleet Forces Command (CFFC)

Scope of 2006 Study

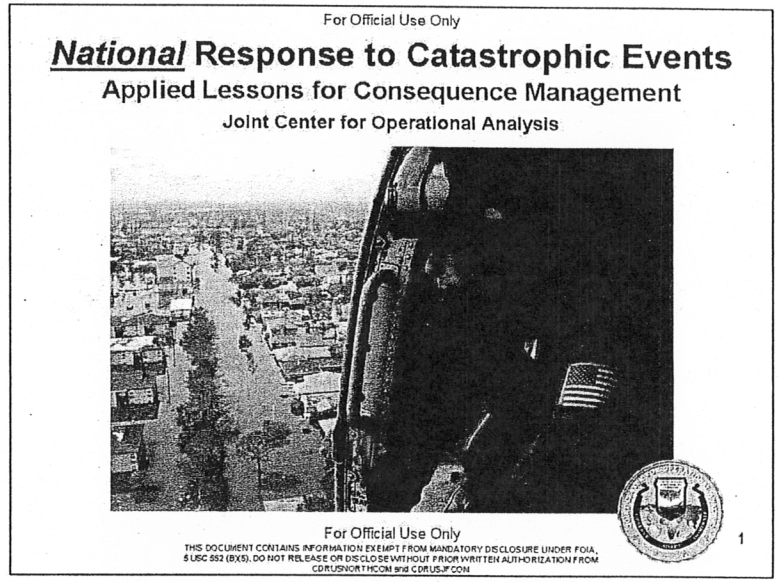
Focused on exercises in preparation for real-world catastrophic incidents

Used Katrina issues as framework
- Learn from natural disaster to support future response
- Tie to other lessons-learned as appropriate
- Support Pandemic Influenza study activities

Reviewed changes to plans and policy
- Changes since Katrina?

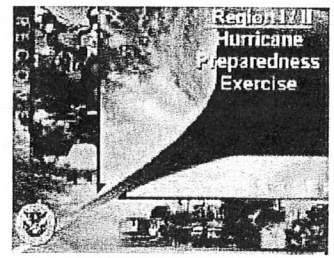
Participated in:
- Ardent Sentry 06/Positive Response 06-2
- DHS Hurricane Preparedness Tabletop Exercises
- National Guard Bureau Vigilant Guard Exercise

Quick-look Briefing (30 May 06) ■
- Identified key operational-level issues



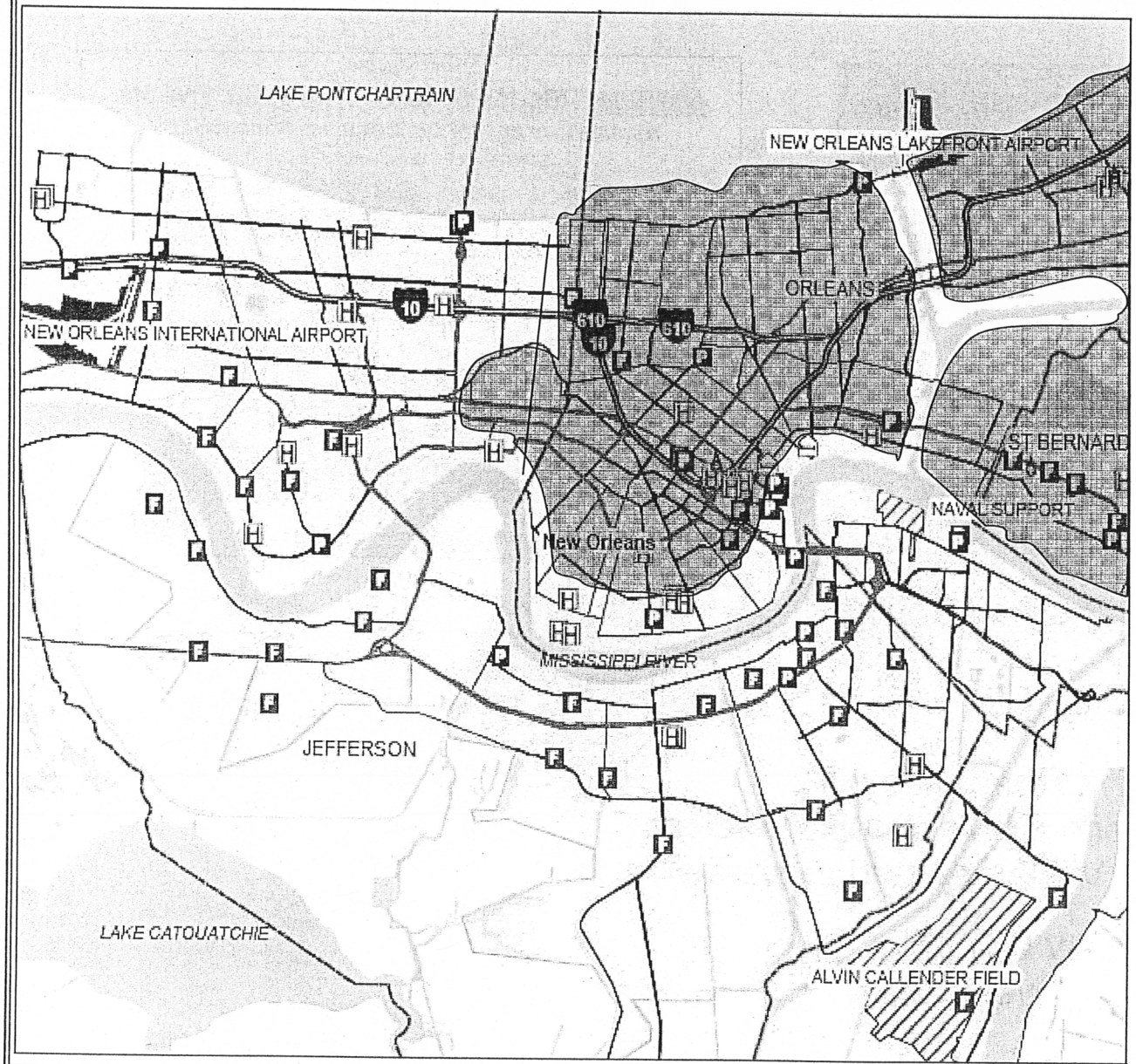






Flooding of First Responder Facilities

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Maximum extent of flooding

Legend

- Blood/Organ Bank
- Homeless Shelter
- Fire Station
- Law Enforcement
- Hospital
- Projected Hurricane Track
- Major Road
- Secondary Road
- Military Base

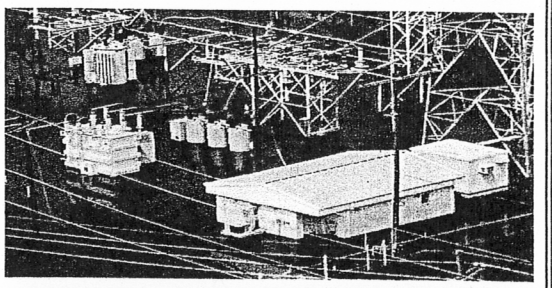
Locator Map

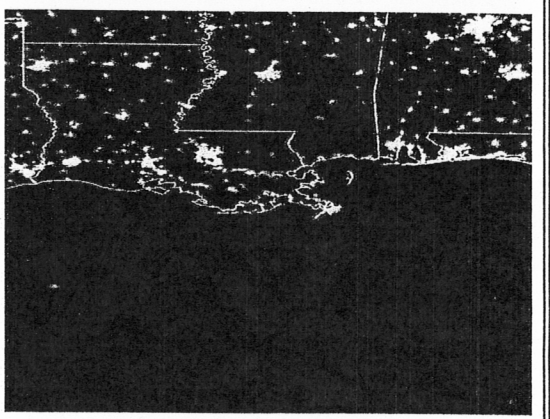
Wind Swath

- 39 mph
- 58 mph
- 74 mph

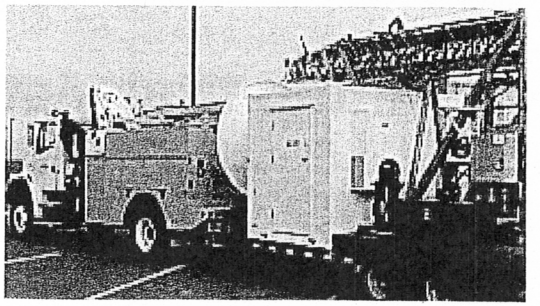
Communications and Support Infrastructure Destroyed

- Three million people lost phone service across three states--15% still out after two weeks
- Huge physical infrastructure losses
  - 1000+ wireless towers knocked down
  - 11,000 utility poles down
  - 26,000 spans of cable down
  - 22,000 line drops down
  - Significant portions of electrical grid down
- Serious breakdown of the 911 system across a wide area
  - Forty three 911 call centers rerouted
- Land mobile radio repeaters offline, causing command-and-control breakdown among first responders
- 100+ broadcast stations knocked off the air
- Infrastructure in New Orleans LA, Biloxi MS and Gulfport MS considered nearly destroyed





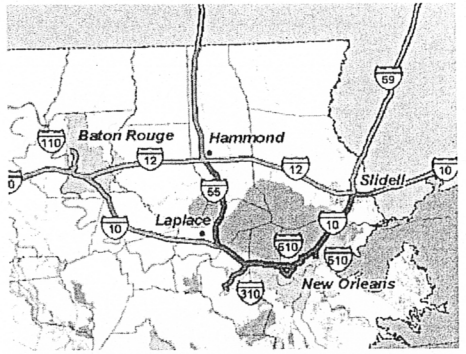
Red = Power Outages

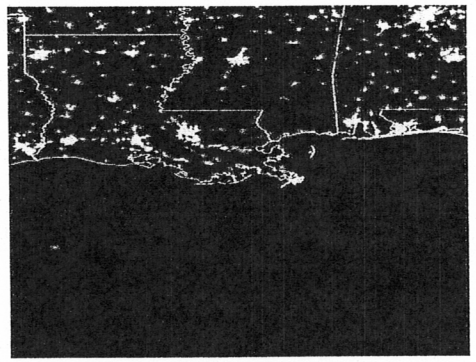


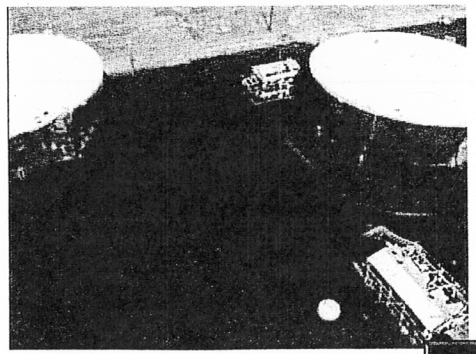
An SBC microwave tower in transit

Delayed Assessment of Damage to Infrastructure

- **Transportation Network**
  - Maritime channel markers and navigation aids destroyed
  - Coastal roads impassible by conventional vehicles
  - No fuel distribution for vehicles
- **Power Distribution & Communications**
  - Waterford 3 nuclear plant forced into cold shutdown for lack of security
  - Most high-voltage lines down in coastal areas
  - Severely degraded communications
- **Industrial Materials**
  - Possible damage to liquid hydrogen plant
  - Scope of refinery oil spills





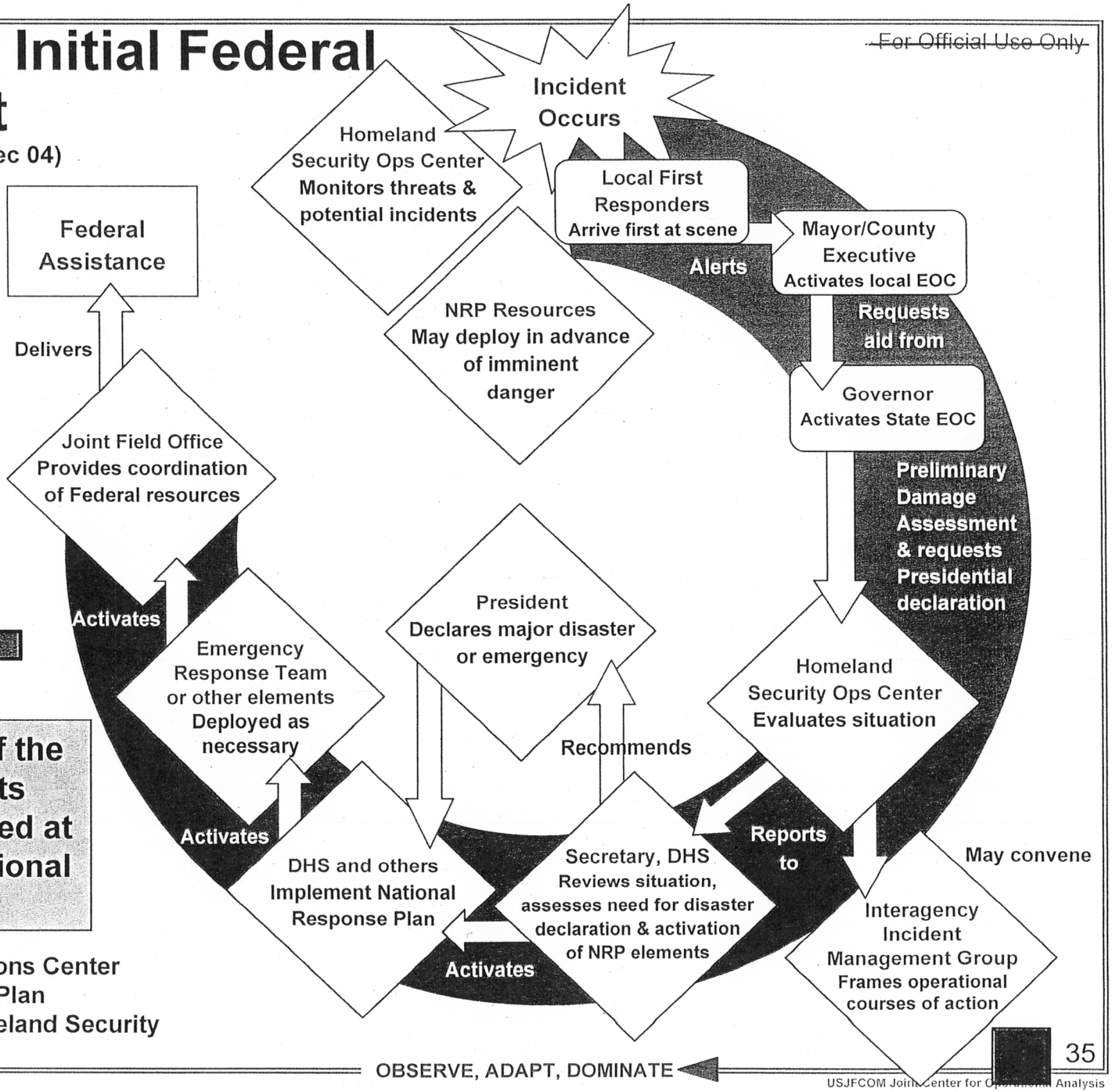


Source: Homeland Security Operations Center Situation Report & Governor's Letter (2 Sep)

Overview of Initial Federal Involvement

(National Response Plan, Dec 04)

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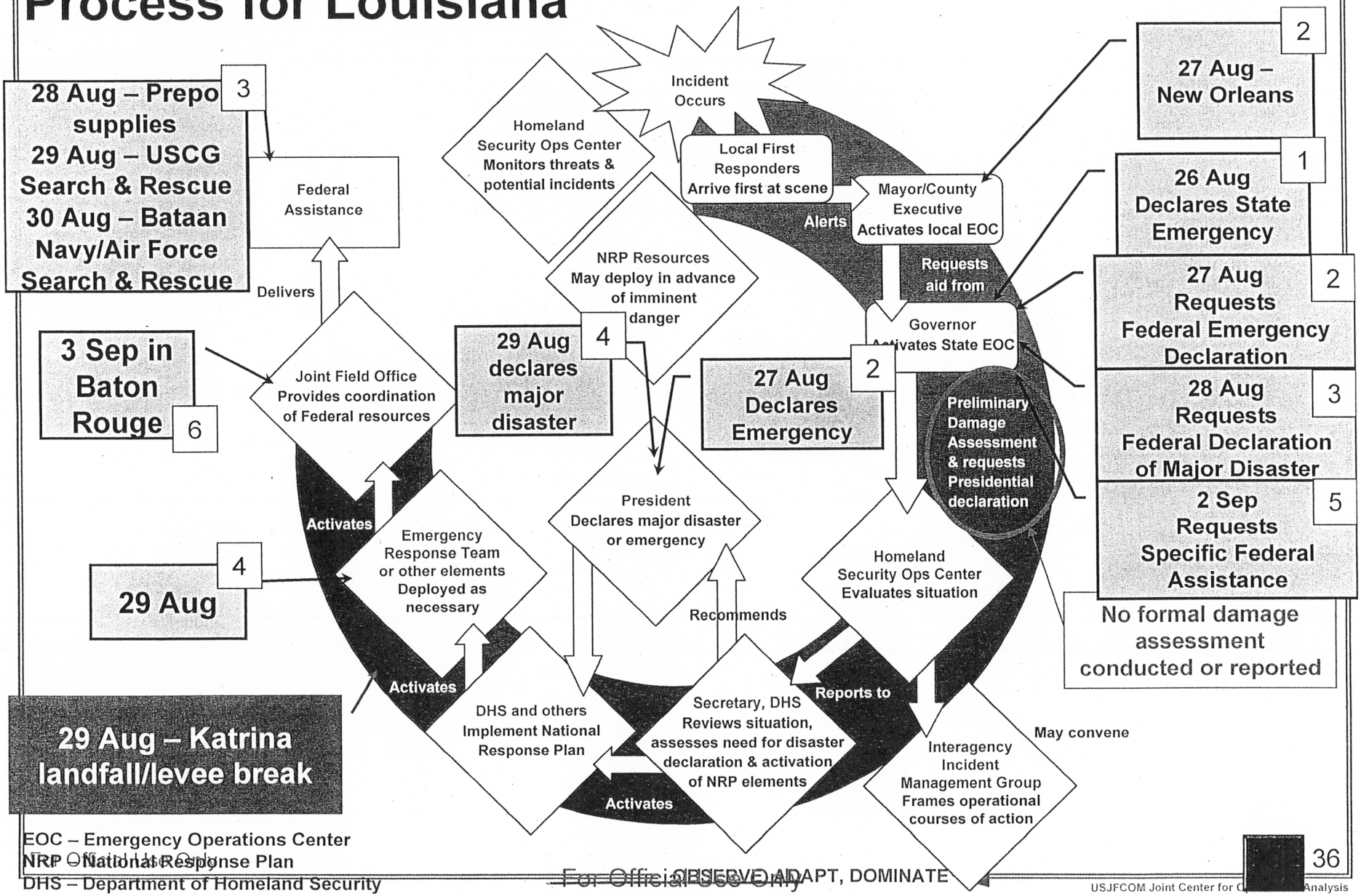
Katrina Timeline

"A basic premise of the NRP is that incidents are generally handled at the lowest jurisdictional level possible."

EOC – Emergency Operations Center
NRP – National Response Plan
DHS – Department of Homeland Security

~~For Official Use Only~~

Hurricane Katrina Federal Response Process for Louisiana



EOC – Emergency Operations Center
NRP – National Response Plan
DHS – Department of Homeland Security

LEGAL PERMISSIONS/RESTRICTIONS

(circa Aug 2005)

In most cases, State Governors must request federal assistance/response before it can be provided

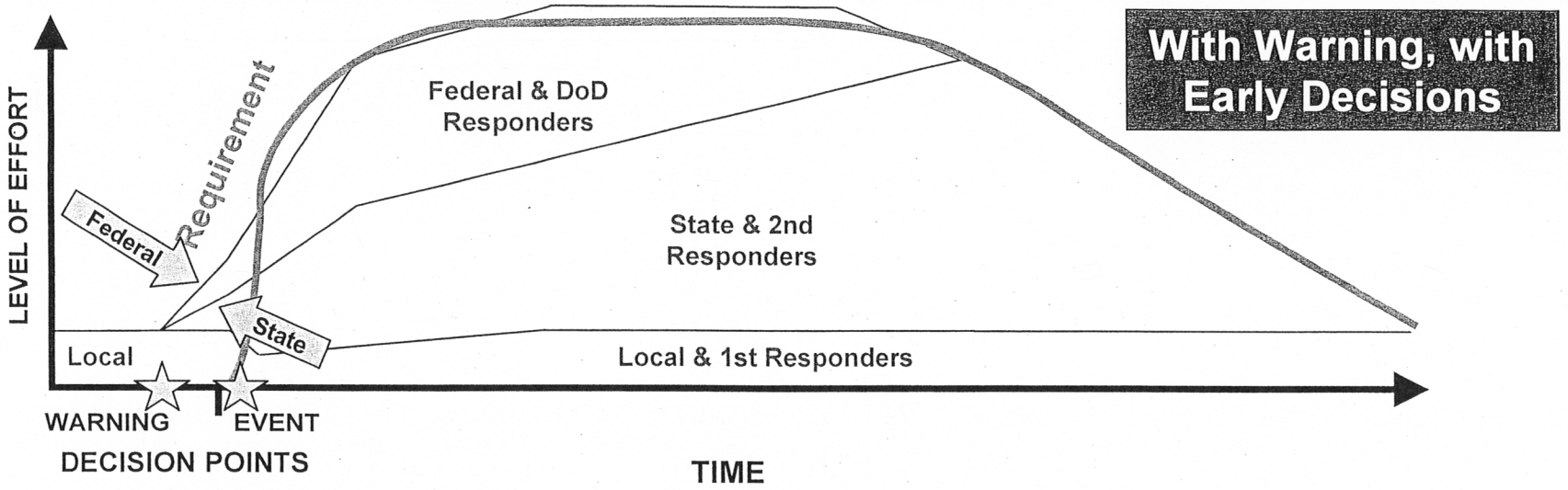
- **US Constitution** (Article IV. Section 4)
  - "The United States . . . shall protect each of them [the States] . . . on application of the [State] against domestic violence."
- **Stafford Act** (42 USC §§5121-5206)
  - "All requests for a declaration by the President that an emergency or major disaster exists **shall** be made by the Governor of the affected State."*
- **Insurrection Act** (10 USC §§331-335)
  - " §331- Whenever there is an insurrection in any State…the President may, **upon the request of its legislature or of its governor**…call into Federal service…the militia of the other States…and use such of the armed forces, as he considers necessary…."

Additional Mechanism

- **Economy Act** (31 U.S.C. 1535; FAR 17.500 et.seq.)
  - "The head of an [Federal Executive] agency…may place an order with…another [Federal Executive] agency for goods or services….[and] Payment shall be made…for any part of the estimated or actual cost as determined by the agency filling the order. "

*Exception for emergency affecting Federal property, or a matter in which the Federal government has primary responsibility

Future Response to a Catastrophe



Designated Response Organizations + Authorities for Unity of Effort + Interoperable Communications + Plan + Integrated Exercises = **Pre-event Capability**

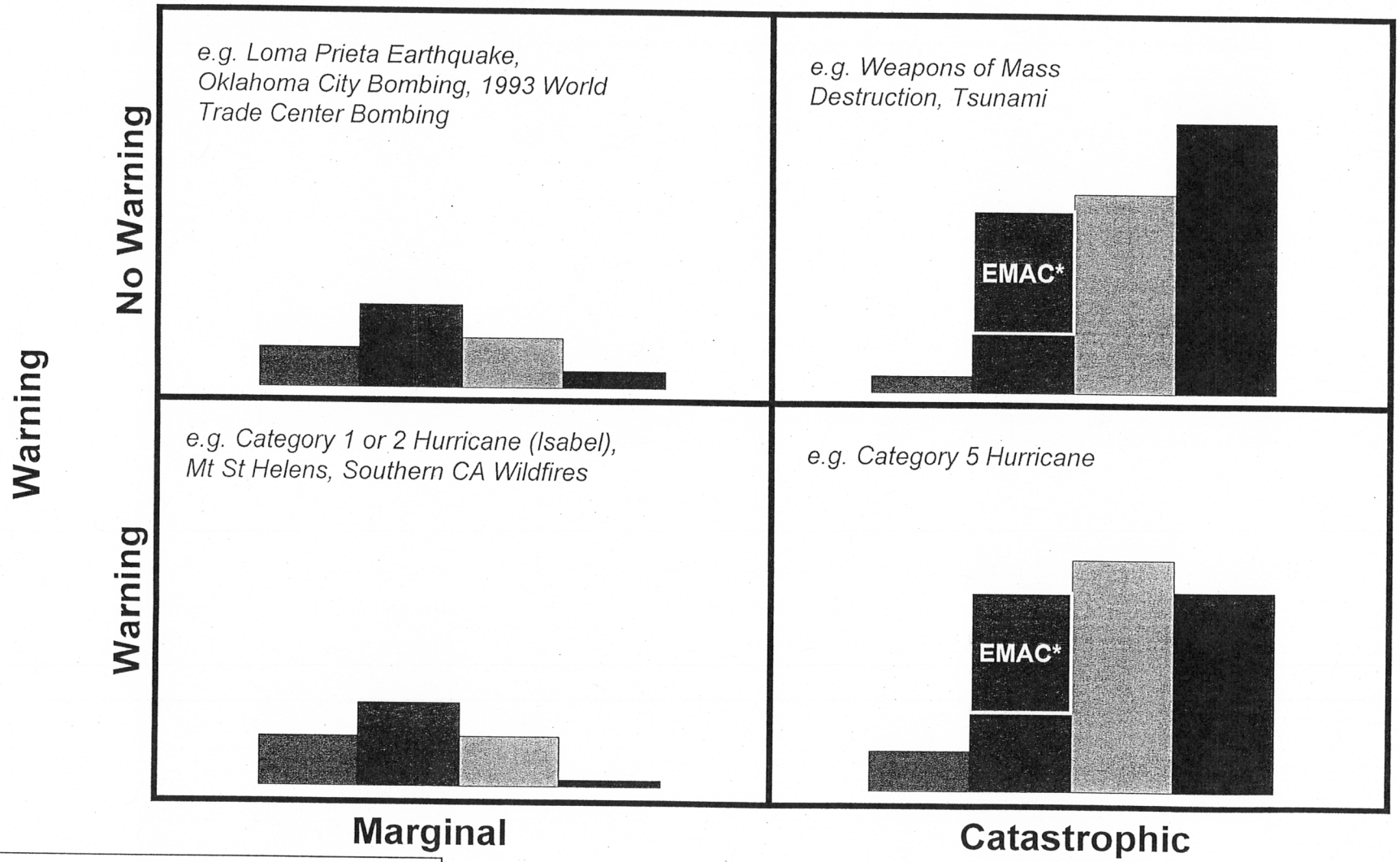
Pre-event Capability + Indications & Warning + Risk Assessment + Authorities to Position = **Posturing Resources**

Posturing Resources + Permissions & Triggers + Unity of Command + Situational Awareness + Surge Transportation = **Rapid Employment**

Pre-event Capability + Posturing Resources + Rapid Employment = **Required National Response**

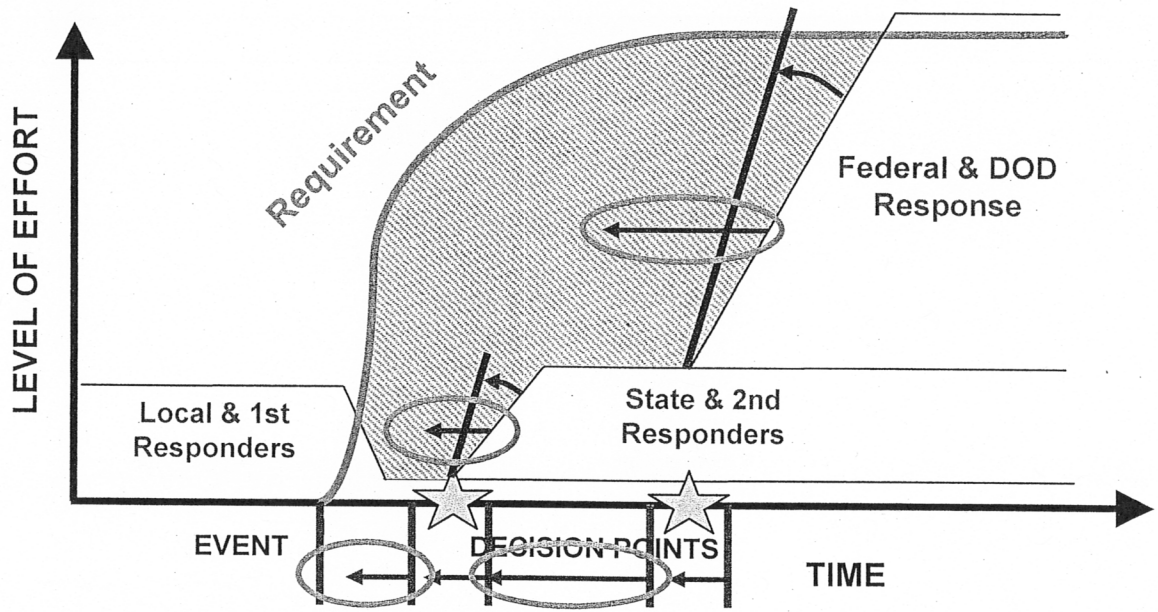
Burden of Incident Response (Capabilities-based)

For Official Use Only



OBSERVE, ADAPT, DOMINATE

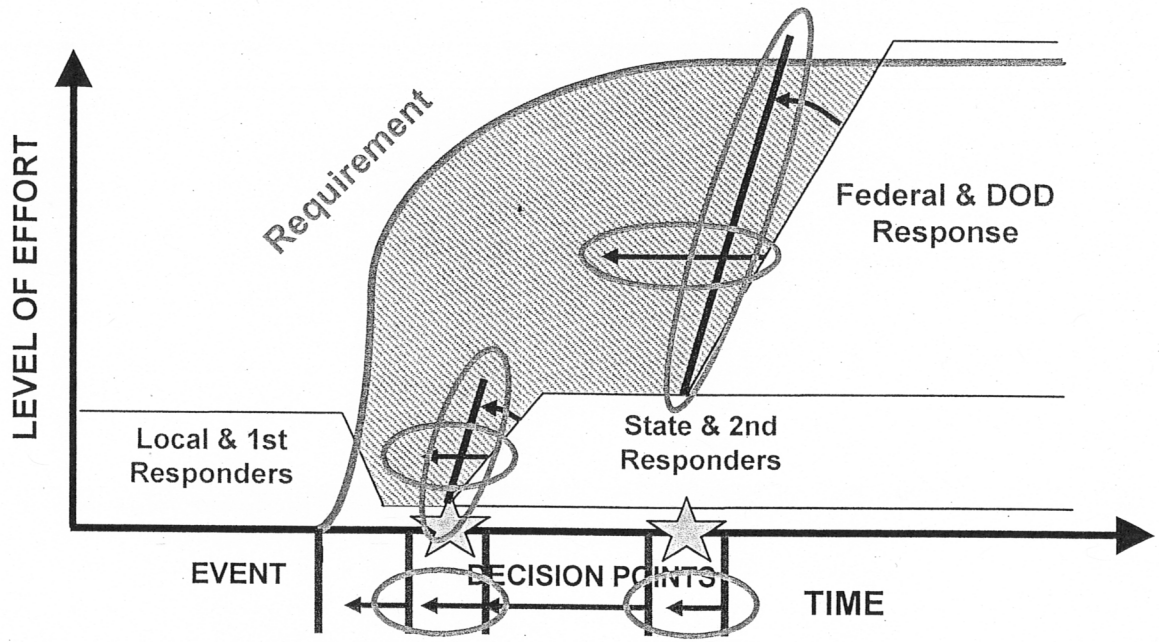
Closing the Response Gap—Situational Awareness



Three basic approaches to improve the response:

- Accelerate decisions
- Alter capabilities
- Change the requirement

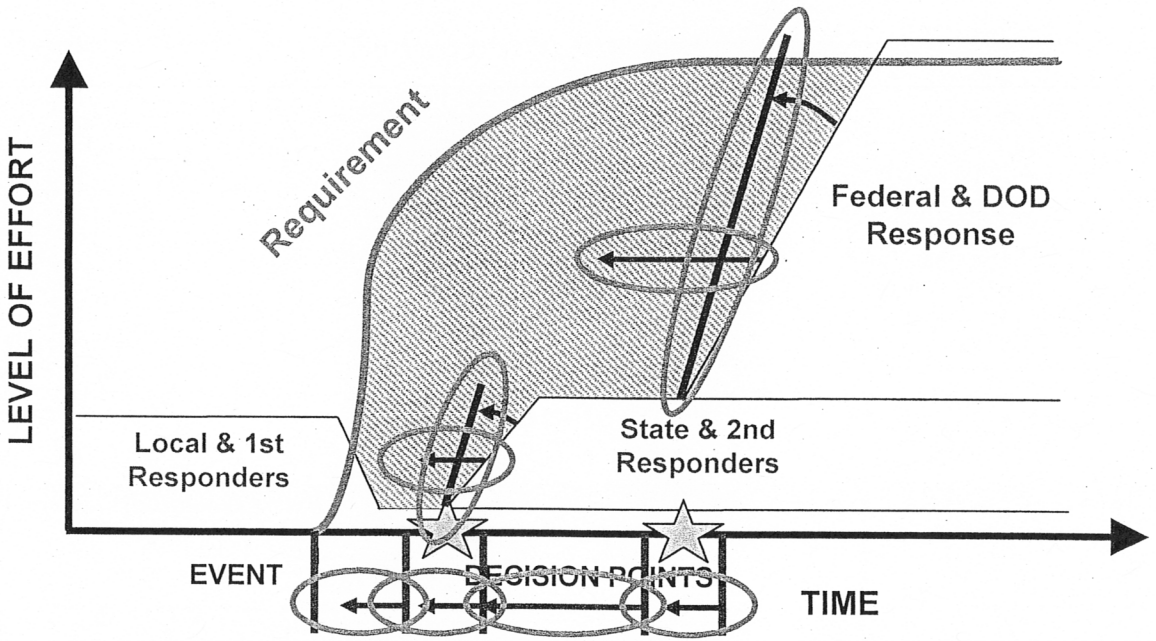
Closing the Response Gap—Unity of Effort



Three basic approaches to improve the response:

- Accelerate decisions
- Alter capabilities
- Change the requirement

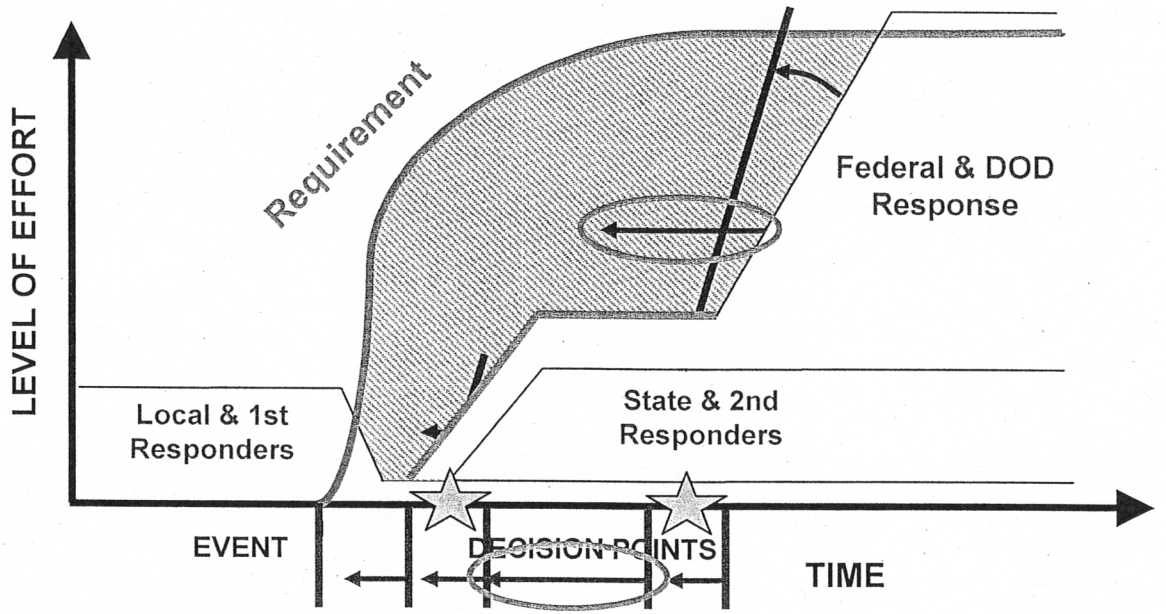
Closing the Response Gap—Policies



Three basic approaches to improve the response:

- Accelerate decisions
- Alter capabilities
- Change the requirement

Closing the Response Gap—Authorities

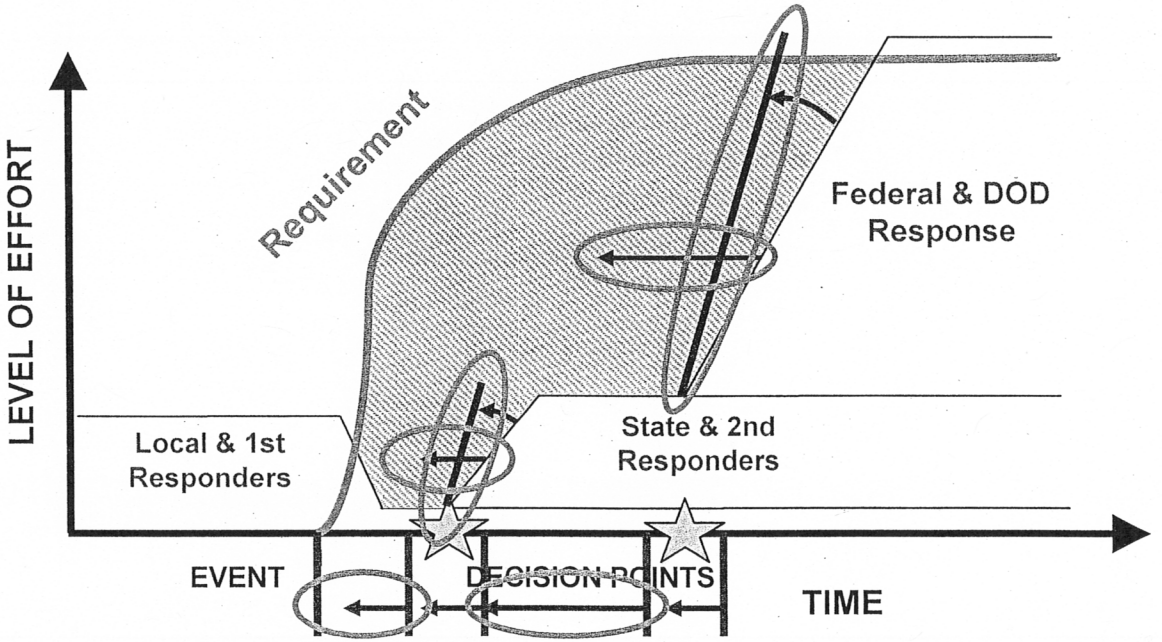


Three basic approaches to improve the response:

- Accelerate decisions
- Alter capabilities
- Change the requirement

Special case: Title 14/Title 33

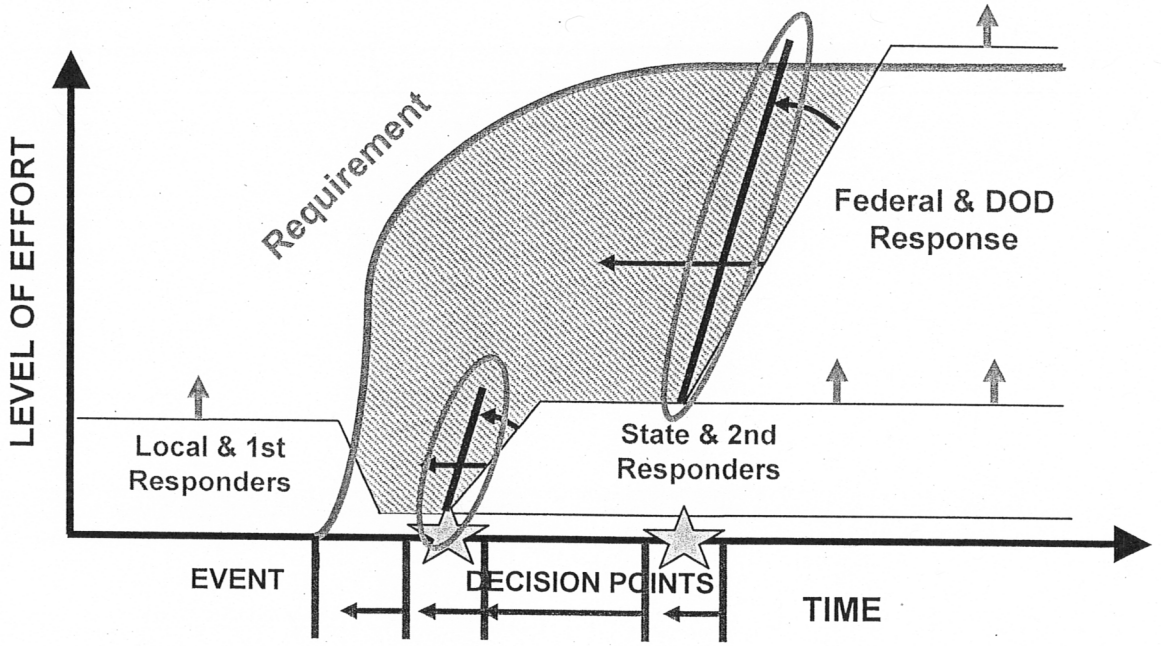
Closing the Response Gap—Laws



Three basic approaches to improve the response:

- Accelerate decisions
- Alter capabilities
- Change the requirement

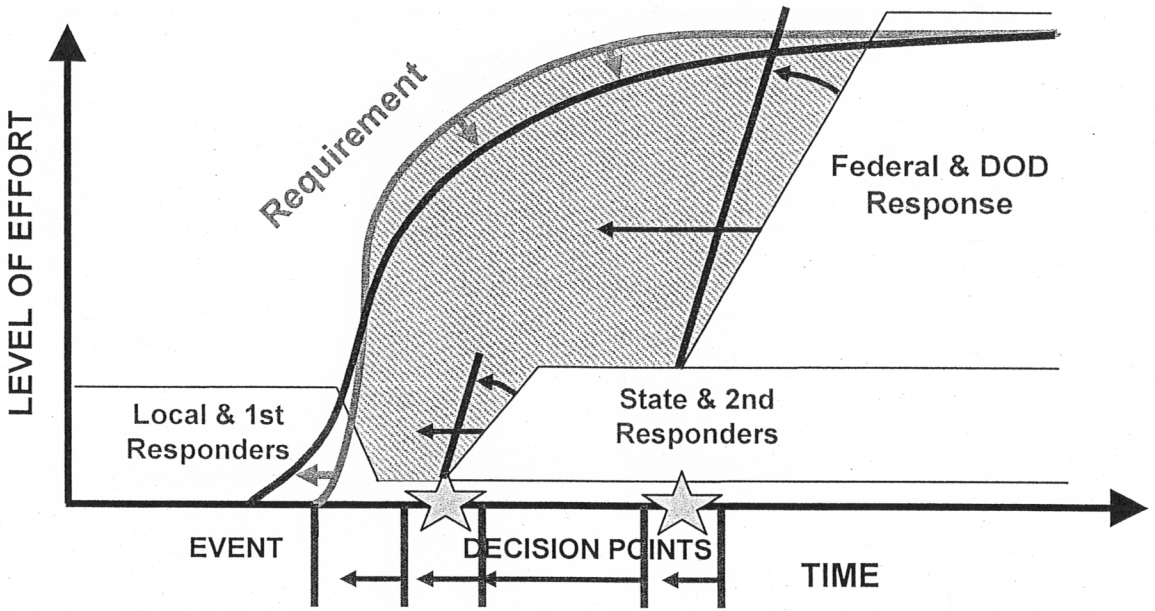
Closing the Response Gap—Resources



Three basic approaches to improve the response:

- Accelerate decisions
- Alter capabilities
- Change the requirement

Closing the Response Gap—"The Public"



Three basic approaches to improve the response:

- Accelerate decisions
- Alter capabilities
- Change the requirement

Overarching Legal Framework

In most cases, State Governors must request federal assistance/response before it can be provided

- **US Constitution** (Article IV. Section 4)
  - The United States . . . shall protect each of them [the States] . . . on application of the [State] against domestic violence.

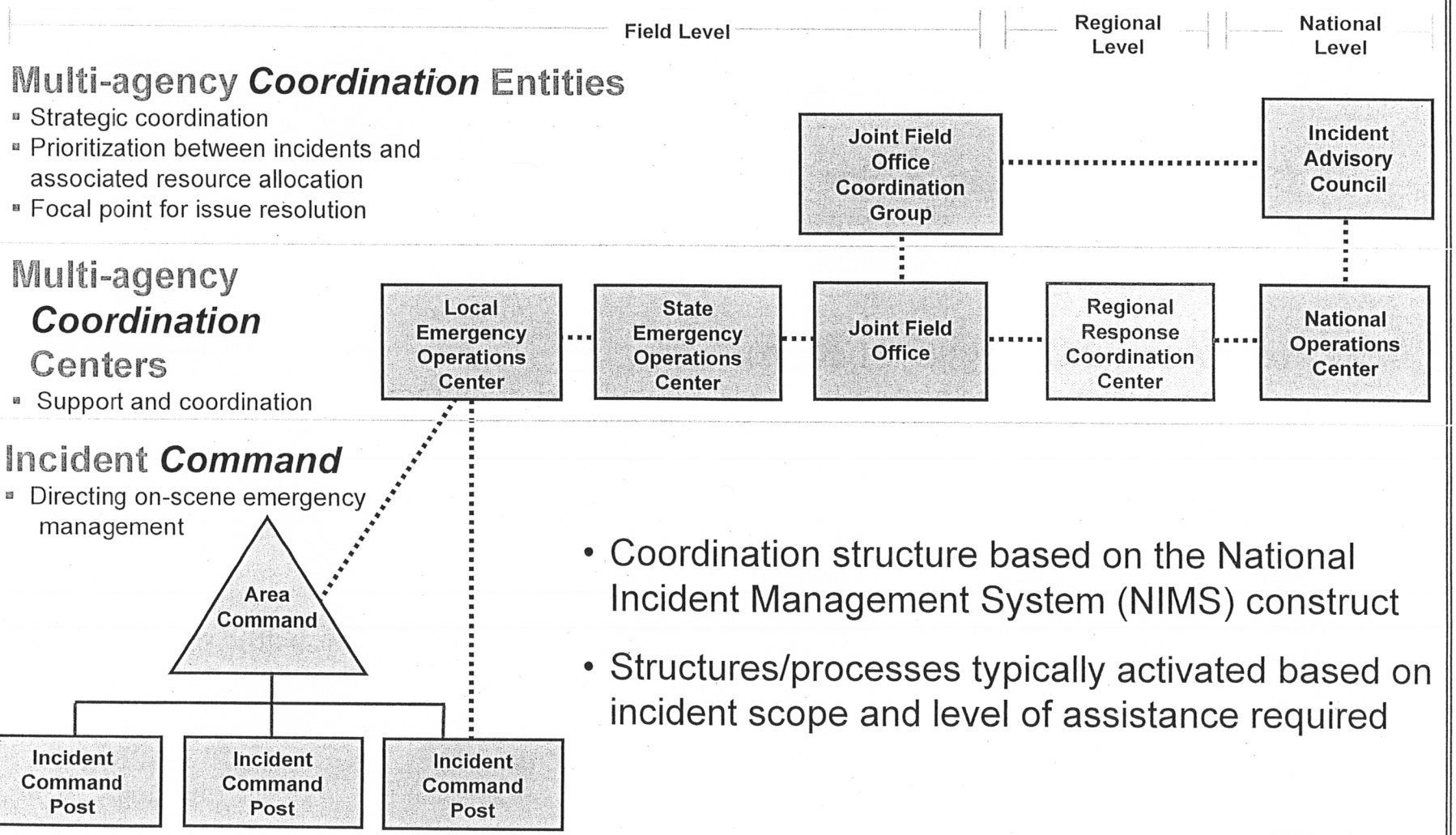
- **Stafford Act** (42 USC §§5121-5206)
  - All requests for a declaration by the President that an emergency or major disaster exists **shall** be made by the Governor of the affected State. *

Additional Mechanism

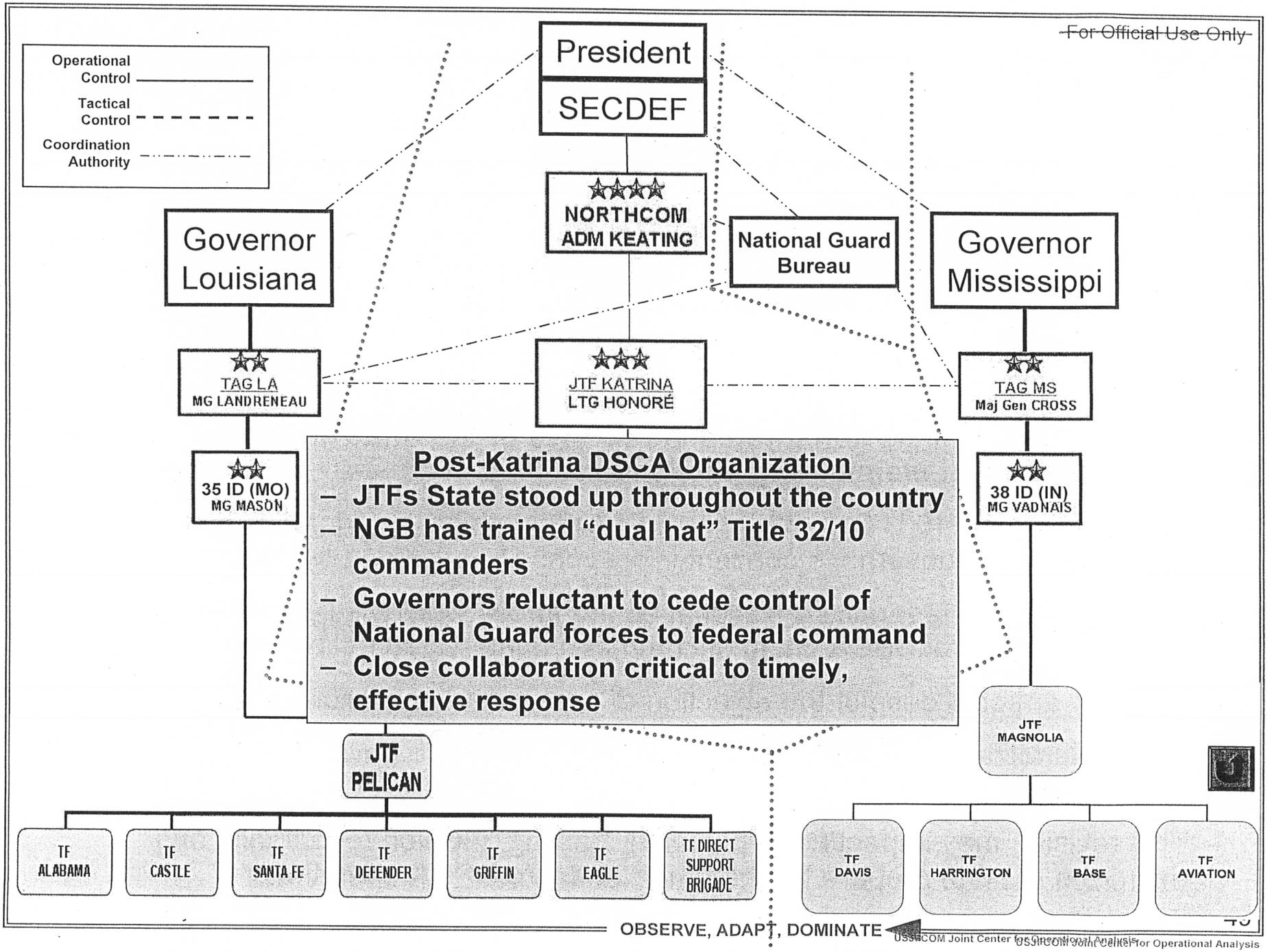
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*Exception for emergency affecting Federal property, or a matter in which the Federal government has primary responsibility

National Incident Management System



- Coordination structure based on the National Incident Management System (NIMS) construct
- Structures/processes typically activated based on incident scope and level of assistance required



USSOCOM Joint Center for Operational Analysis

Revision of the Insurrection Act
(10 U.S.C. 331-335, updated October 2006)

- National Defense Authorization Act for FY07--major revision to Insurrection Act
- Gives President new unilateral options to "employ the armed forces, including the National Guard in Federal service, to restore public order and enforce the laws…
  - "as a result of a **natural disaster, epidemic, or other serious public health emergency, terrorist attack or incident**, or
  - "…the **President determines** that...domestic violence has occurred to such an extent that the **constituted authorities of the State** or possession are **incapable of maintaining public order**..."
- Revised statute (10 U.S.C. 333) gives President ability to federalize National Guard without a governor's consent in response to a Katrina-like catastrophe
  - Title 10 and federalized National Guard forces would likely operate under a single Federal DSCA chain of command under USNORTHCOM
- New law enacted despite the objection of every state governor
  - Federalization of the National Guard would deprive governors of direct command over one of their primary disaster response capabilities
- This revision may impact DOD planning, training, mission rehearsals, and exercises used to prepare for the range of future DSCA operations

Catastrophic Provisions of the NRP Broadened

- Catastrophic Incident Annex is primarily designed to address catastrophic events involving little or no warning
  - Examples: chemical, biological, radiological, nuclear, or high-yield explosive weapons of mass destruction, or large magnitude earthquakes
- New clarification (25 May 06): other incidents may be projected to have catastrophic implications (e.g. major hurricane); Federal Government may activate a proactive response by pre-deploying assets
  - **No-notice/short notice catastrophic events:** when there is little or no time to assess the requirements of the State and local authorities, all Federal departments and agencies and the American Red Cross initiate actions to mobilize and deploy all resources by scenario type as planned for in the NRP-CIS
  - **Potential incidents with time to coordinate** (State, local, and private sector authorities): Federal departments and agencies and the American Red Cross will pre-deploy appropriately tailored elements of the NRP-CIS, as well as other Federal resources as required to meet the anticipated demands of the specific incident scenario
- Detailed Catastrophic Incident Supplement released through the Homeland Security Council

2006 Pre-Landfall Policy for Major Hurricanes

- FEMA interim policy guidance (June 9, 2006) clarified the circumstances for which a state will be considered for a Presidential emergency declaration prior to landfall
- Criteria for a pre-landfall emergency declaration to be considered:
  - A state of emergency is declared by the governor
  - A projection by the National Weather Service that the state will be threatened by a major hurricane
  - Other criteria to be met include *either:*
    - *Mandatory* evacuation orders for three or more counties, or area with a combined population of more than 100,000 residents; *or*
    - Federal Support necessary to meet critical readiness requirements which would overwhelm the capability of state resources
- Standard policy for requesting declaration remains the same: Gubernatorial emergency declaration and request to the President for a Federal emergency declaration
- A State's pre-landfall disaster declaration in no way obligates the President to approve or disapprove any declaration request
- The Federal share for a pre-landfall emergency declaration will not be less than 75 percent of the eligible costs

Roles and Responsibilities of the PFO/FCO

Primary Federal Official (PFO) [NRP-defined]

- Once formally designated, PFOs relinquish the conduct of all normal day-to-day duties and functions
- PFOs typically may not be "dualhatted" with any other roles or responsibilities that could detract from their overall incident management responsibilities
- PFOs have no authority over federal, state or local partners and cannot direct FCOs
- The Secretary may, in other than terrorism incidents, choose to combine the roles of the PFO and FCO in a single individual to help ensure synchronized Federal coordination

Federal Coordinating Officer (FCO) [Statutory, Stafford Act]

- The FCO manages and coordinates Federal resource support activities related to Stafford Act disasters and emergencies
- The FCO assists the Unified Command and/or the Area Command
- The FCO works closely with the PFO and other senior Federal officials
- In instances where the PFO has also been assigned the role of the FCO, deputy FCOs for the affected States will be designated to provide support to the PFO/FCO and facilitate incident management span of control

Source: Notice of Change to the National Response Plan (25 May 2006)

Defense Support of Civil Authorities (DSCA) Standing EXORD

- Effective 28 Apr 06, All-hazards-based
- Applies to USNORTHCOM, USPACOM, USSOUTHCOM as appropriate
- Approves deployment/use of the following DOD assets for up to 20 days:
  - Defense Coordinating Officers and Defense Coordinating Elements
  - DOD installations for use as FEMA mobilization centers/operational staging areas
  - Manpower/C130 aircraft for firefighting (Nat'l Interagency Firefighting Center support)
- Authority to place assets in a prepare-to-deploy order (PTDO) status for up to seven days:
  - Up to eight medium lift helicopters, up four heavy lift helicopters
  - One search aircraft with crew capable of conducting imagery and assessment of the affected area
  - Response command, control and communications support
  - Patient movement capability for 500 patients
  - Task force or joint task force headquarters
  - Combatant command commanders assessment element
  - Forward surgical team to provide emergency medical treatment
  - Personnel to staff a joint deployment distribution operations center
- SECDEF notification through the CJCS is required before deploying and employing forces placed on PTDO status

Memo to President on DOD Temporary Lead in Catastrophe

- DOD and DHS tasked to define the circumstances and objectives when DOD might be required to assume the lead for the federal response
  - Joint DOD/DHS memo to President did not provide specific circumstances/events
  - Acknowledged the possibility of DOD lead, and recommended considering the following factors in making the decision:
    - The status of the state and local response
    - Intergovernmental relations
    - Implementation of National Response Plan
    - The status of the federal civilian response
    - The involvement of active duty military forces
    - Military-to-military and military-to-civilian relations
  - Joint Staff concerns:
    - A DOD-led response would still need to be reimbursable through FEMA
    - Tasking relationships between FEMA, DHS, DOD, Coast Guard, and others still need to be addressed

MEMORANDUM FOR THE PRESIDENT

SUBJECT: Katrina After-Action Lessons Learned Recommendation that DoD and DHS Determine when the Department of Defense Would be Involved in a Catastrophic Event – Natural or Man-Made

"The Federal Response to Hurricane Katrina Lessons Learned," published in February, requested that the Department of Defense (DoD) and the Department of Homeland Security (DHS) develop recommendations for revision of the National Response Plan, with respect to the circumstances and objectives when DoD might be required to temporarily assume the lead for the Federal response to a catastrophic incident.

We recommend you base any such decision on an assessment of the distinctive facts and circumstances of each catastrophic incident, bearing in mind the operationally relevant considerations.

Key facts and circumstances for consideration in making an assessment might include:

The status of the State and local response. How effective is the initial State and local response, including the use of the affected State's or States' National Guard? Have first responders been overwhelmed by the incident? What is the availability of National Guard assistance from other States?

Intergovernmental relations. What is the nature of the relationship, skill, and trust among the leadership of the Federal, State (or States), and local governments in the affected jurisdictions?

Implementation of the National Response Plan. Has the Governor of the affected State requested Federal assistance or, in the absence of a request, have you invoked applicable Federal authorities to initiate a Federal response?

The status of the Federal civilian response. Do available Federal civilian responders, with their contracted support, have the necessary capabilities to deal effectively with the incident? Are they, in fact, dealing effectively with the incident? What are the recommendations of the Secretaries of Homeland Security and Defense?

Incident Awareness and Assessment Changes

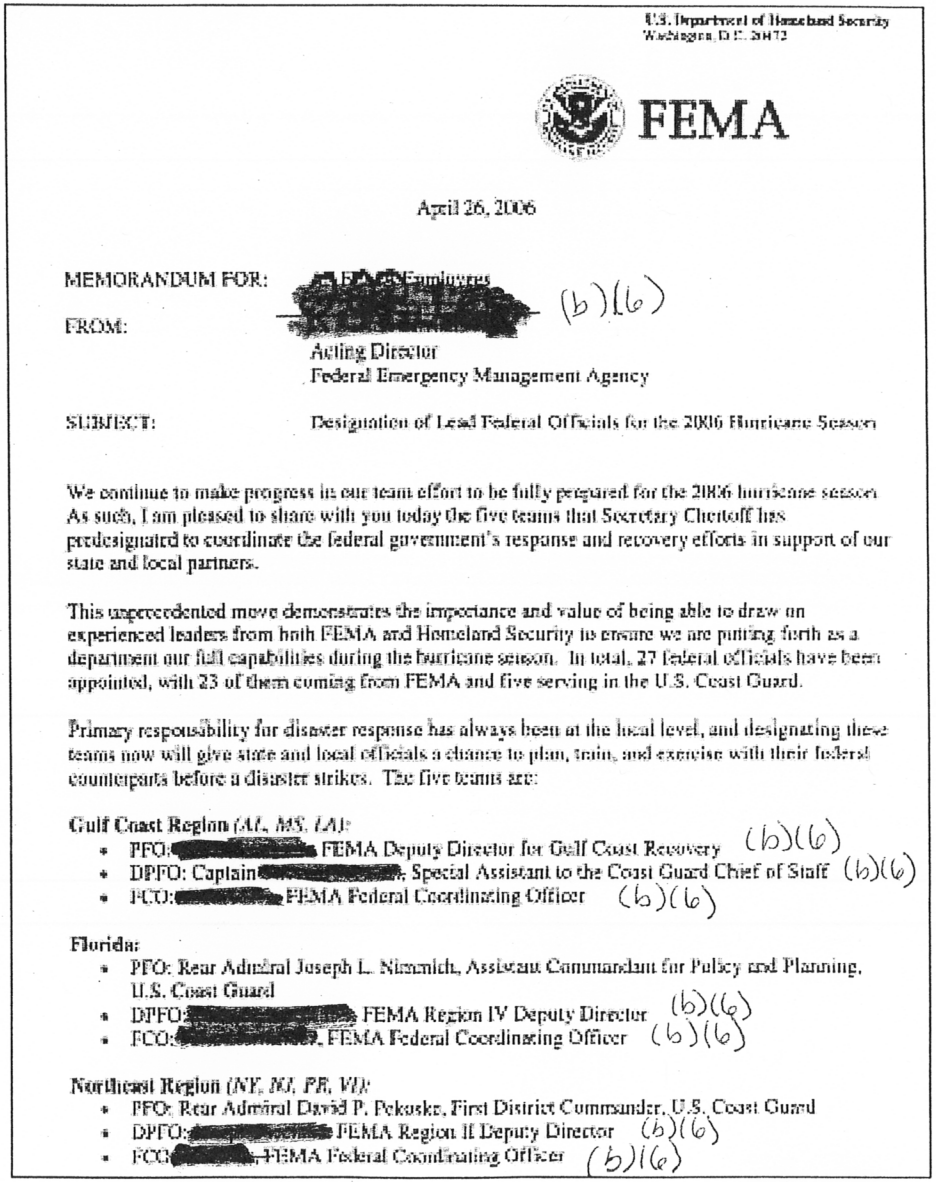
- **New term** - sensitivity to CONUS "ISR"
- **Organizations**
  - USNORTHCOM collection management structure, Joint Intelligence Operations Center
  - Increased AFNORTH role in collection management
  - DHS ISR Branch, Interagency Collection Board
- **Collection**
  - NORTHCOM ISR CONOPS
  - DSCA EXORD, USAF force packages
  - Civil Air Patrol hyperspectral missions
  - FAA approval for CONUS use of UAVs
  - DHS Situational Awareness Teams, ARNORTH Scouts
  - Baseline imagery missions underway for coastal areas
- **Coordination/Dissemination**
  - No common USG list of critical information requirements
  - Open collection management/cross-department tasking issues
  - DHS and USNORTHCOM working on unclassified COP for USG and states, not complete
  - Cross-domain information exchange standards/tools incomplete
  - Standing Proper Use Memo for national and commercial imagery signed

Improved Regional Response Structure

- As a result of change to the NRP, multiple Joint Field Offices may be established regionally
  - One of the JFOs may be identified (typically in the most heavily impacted area) to serve as the primary JFO and coordinate the overall incident management effort
- DHS pre-designated five teams (27 officials) to coordinate the Federal government's role in preparing for, and responding to, major natural disasters during the 2006 storm season
  - These include Principal Federal Officials (PFO), Deputy Principal Federal Officials (DPFO) and Federal Coordinating Officers (FCO)
- According to the NRP, DOD Joint Task Force headquarters will collocate at the JFO whenever possible
  - If impracticable, the JTF headquarters will be connected virtually to the JFO and will assign liaisons to the JFO
- DOD has pre-positioned full-time Defense Coordinating Official (DCO) and Defense Coordinating Element (DCE) in each FEMA region to assist with planning and logistics movement
- Emergency Support Functions (ESFs) are not yet aligned with the JFO structure

Pre-designated Federal Officials

- FEMA Memo 26 Apr 06
  - PFO, Deputy PFO, Primary FCO appointed for each of five hurricane "regions"
  - Several FCOs pre-designated for coastal states
- Individuals have been through training specific to the 2006 hurricane season
- Solution is hurricane-focused; does not pre-assign for other incidents outside the specified states



U.S. Department of Homeland Security
Washington, D.C. 20472

FEMA

April 26, 2006

MEMORANDUM FOR: [redacted] (b)(6)

FROM: [redacted]
Acting Director
Federal Emergency Management Agency

SUBJECT: Designation of Lead Federal Officials for the 2006 Hurricane Season

We continue to make progress in our team effort to be fully prepared for the 2006 hurricane season. As such, I am pleased to share with you today the five teams that Secretary Chertoff has predesignated to coordinate the federal government's response and recovery efforts in support of our state and local partners.

This unprecedented move demonstrates the importance and value of being able to draw on experienced leaders from both FEMA and Homeland Security to ensure we are putting forth as a department our full capabilities during the hurricane season. In total, 27 federal officials have been appointed, with 23 of them coming from FEMA and five serving in the U.S. Coast Guard.

Primary responsibility for disaster response has always been at the local level, and designating these teams now will give state and local officials a chance to plan, train, and exercise with their federal counterparts before a disaster strikes. The five teams are:

Gulf Coast Region *(AL, MS, LA)*:
- PFO: [redacted] FEMA Deputy Director for Gulf Coast Recovery (b)(6)
- DPFO: Captain [redacted], Special Assistant to the Coast Guard Chief of Staff (b)(6)
- FCO: [redacted] FEMA Federal Coordinating Officer (b)(6)

Florida:
- PFO: Rear Admiral Joseph L. Nimmich, Assistant Commandant for Policy and Planning, U.S. Coast Guard
- DPFO: [redacted] FEMA Region IV Deputy Director (b)(6)
- FCO: [redacted] FEMA Federal Coordinating Officer (b)(6)

Northeast Region *(NY, NJ, PR, VI)*:
- PFO: Rear Admiral David P. Pekoske, First District Commander, U.S. Coast Guard
- DPFO: [redacted] FEMA Region II Deputy Director (b)(6)
- FCO: [redacted] FEMA Federal Coordinating Officer (b)(6)

Close Coordination with National Guard

- JTF Commander Training Course
  - 175 trained in first three courses – National Guard, Reserve, Active Duty, and Interagency Students – Rank 0-6 through 0-8
  - Each state/territory will have at least two trained JTF Commanders at end of course; most states and territories will have three or more
- National Guard in NORTHCOM
  - National Guard personnel continue to fill positions on staff
  - Formalized National Guard desk in NORAD-NORTHCOM Command Center
  - NGB J-5 & N-NC coordinating on CONPLANS to synch efforts between Title 10, Title 32, State Active Duty
- EMAC—NGB first agency outside states to become a trusted partner
  - Centralized visibility of EMAC requests during a crisis
  - Provides better awareness of non-Federal resources to factor into Request for Forces coordination process
- Training, Exercise, Lessons
  - NGB J7 has expanded involvement in Regional, COCOM, and Principle Level Exercises; NGB J7 Lessons Learned (LL) observes state exercises
  - NGB J7 LL conducted interagency collection with Center for Army Lessons Learned and DHS during Operation JUMP START (border security)

2006 Exercises Have Fostered Pre-Event Collaboration

Ardent Sentry 06/Positive Response 06-2

- Exercise aligned with Arizona and Michigan exercises, but no simultaneous operations with state, federal, Title 10 and Title 32 at JTF/JFO level and below
- Use of JFO and National simulation-cells was win-win for DHS and DOD

DHS Hurricane Preparedness Tabletops

- Five regions, ~20 states, numerous state, federal, military and private participants
- Short duration did not allow for real-time events; players did not have time to work through actual fog/friction

National Guard Bureau Region VIII+ Vigilant Guard Exercise

- Eight states participated in an earthquake scenario centered in Salt Lake City
- Command post exercise focused on integrating the Utah State JTF and Joint Force Headquarters-North (JFHQ-N) into a dual status (Title 32/10) JTF

Louisiana State After Action Report Conferences

- Nine Louisiana regions, plus state and federal partners, participated
- Katrina issues prioritized and regional improvement plans developed; followed by DHS tabletop and statewide functional exercises

Overall Observation

- Scheduling and funding affect State and National Guard participation in national exercises

Communications Improvements and Challenges

- Cooperation on connectivity restoration among National Communications System, DOD and private sector
  - Long-term goal to create a "Civil Reserve Airlift Fleet" type of structure for communications reconstitution
  - DOD, DHS and Louisiana cooperation on state communications plan
  - Standardized FEMA communications packages for Emergency Response Teams and DHS Situational Awareness Teams
  - USNORTHCOM flyaway communications packages—included as part of Pre-scripted Mission Assignments
- Interoperability standards have still not been defined for disaster response
- Key stakeholders still operate in different domains
  - Homeland Security Information Network declared as primary network to coordinate incident management—internet-based
  - DOD joint task forces and COCOM headquarters still geared toward SIPRNET-based coordination and C2
  - No cross-domain security guards available/in use for DSCA support
  - Efforts to work common information elements and data standardization not complete (Homeland Data Sharing Program)

Increased Disaster Resources for 2006

- **FEMA**
  - Four times the MREs are available [CY06] than were available prior to Katrina (enough to feed one million people for one week)
- **DOD**
  - Planners are helping FEMA to draft a logistics concept of operations; currently deployed to hurricane regions
  - Depot infrastructure is in place for the supply, storage and distribution of federal assets
  - CDR USNORTHCOM authorized to pre-position assets
- **National Guard**
  - NGB is working with the States to build a database of standing EMACs
  - $500 million worth of equipment has been borrowed from the active duty military to restock its units
  - $900 million is being spent on new communications equipment and hundreds of tractors and trucks
  - Thousands of trucks, Humvees and other supplies have been shifted to where storms are more likely to strike
  - National Guard officials concerned about funding for equipment (esp. communications), Joint Operations Centers, training and exercises

Approx. 25,000 Title 10 Forces Are Available for 2006 Hurricane Response Operations

Joint Staff tasked JFCOM to provide four FEMA support force packages that could be put on a weeklong "prepare to deploy order" during hurricane season

Force Package No. 1 (pre-event/immediate) • Division tactical command post • Infantry battalion task force with transportation assets • Mobile public affairs detachment • Rotary wing aviation battalion (medium lift) • Ten communications fly-aways teams • Airborne command and control aircraft • Medical logistics forces	Force Package No. 2 (main) • Brigade or regimental combat team with military police personnel for traffic control • Rotary wing aviation brigade, consisting of 36 to 60 medium- and heavy-lift aircraft • Medical specialists, engineers and road-clearing forces
Force Package No. 3 (sustainment) • Additional brigade or regimental combat team • Trucks and other logistics and transportation capabilities • Electric generator equipment	Force Package No. 4 (restoration) • Two more brigade or regimental combat team equivalents • Decontamination company • Additional public affairs personnel • Mortuary affairs collection platoon • Two religious support teams
Plus Special Operations Command • Tactical psychological operations company to disseminate media information	Plus Transportation Command • Patient movement capabilities • Airspace controller

Public Communications Principles/Practice

- **Ardent Sentry 06**
  - Players focused on real world public affairs, not on strategic communications
  - Senior leaders discussed potential use of DOD capabilities to augment civilian leadership communications
  - Joint Task Forces acknowledged need to coordinate with Joint Information Centers—DOD exercise did not simulate JICs
- **DHS Hurricane Preparedness TTX**—PFOs, External Affairs Teams emphasized:
  - Government needs to foster citizen awareness prior to the event
  - Key message: Don't wait until the last minute to evacuate, it will be several days before responders are fully deployed
  - Governor and PFO must quickly fill the information void
  - Information officers should be forward deployed
  - Agencies (including DOD) should coordinate their messages
  - Joint Information Centers should be established early and include local, state and federal representation
  - Media should be embedded in response organizations

Federal, State and Local Disaster Planning

Nationwide Plan Review

- DHS conducted an assessment of catastrophic plans with all fifty six States and Territories and seventy five of the nation's largest urban areas
- Review concluded that officials at all levels are working to strengthen plans and formalize mutual aid agreements
- But catastrophic disaster planning suffers from outmoded planning processes, products, and tools
- Only 27 percent of the states and ten percent of the cities evaluated as adequately prepared to cope with a catastrophic event

Gulf State Hurricane Plans

- Federal government prepared to help move up to 80,000 people by bus and 61,000 by plane or train—almost everyone in the region without cars, including tourists
- Department of Transportation is paying for 200 buses to sit in the Gulf region this summer in case they are needed for evacuations
- DOD has contracted with suppliers to deliver diesel fuel and gasoline for generators and vehicles along escape routes
- State and federal agencies will assist sick, elderly and disabled with evacuation if local plans fall through

Ongoing Corrective Actions—Response Gaps
(and Responsible Agencies)

Collecting and Sharing Information

– Overall IAA architecture (DHS)

– Homeland Data Sharing Program (DHS)

– Homeland Security Information Network (DHS)

– Interagency/state COP (DHS)

– CRAF-like structure for communications reconstitution (DHS)

– State/local dissemination polices for non-imagery IAA products (DHS/DOD?)

– IAA collection requirement process for military (NORTHCOM/NGB)

Integrating Training and Exercises

– Additional funding for state and National Guard participation in multi-state disaster exercises (States/White House/Congress)

– Synchronization of state and interagency exercises (DHS/DOD/States)

– Multi-state disaster field training exercises (DHS/DOD)

– Inclusion of scenarios where first responders are overwhelmed (DHS/DOD)

– Focus on public communications (e.g., JIC simulation) (DHS/DOD)

– Employment of multiple federal assessment teams (DHS/DOD)

Matching Military Capabilities with Civilian Requirements

– Funding of forces to "lean forward" prior to disaster (OSD/White House/Congress)

– Balancing of CONUS DSCA response with global commitments (OSD/JS/JFCOM)

– Single DSCA force provider process (DOD/NGB/White House)

– Detailed RFA/MA SOP (NORTHCOM)

– Deployment trigger for "time critical" assets (DHS/DOD)

– Centralized tracking of forces and resources (DHS/DOD et al)

Other Gaps

– Catastrophic planning processes, products, and tools (Local and State Governments)

– Additional DSCA funding for National Guard operations and equipment (OSD/White House/Congress)

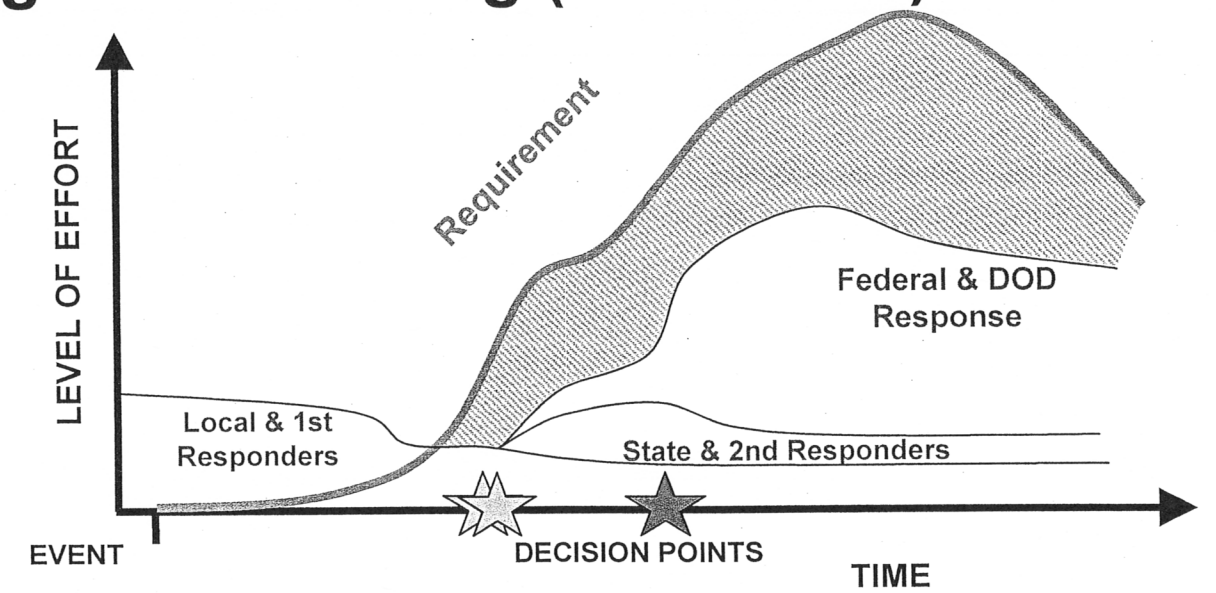
–Triggers and procedures for JTF integration with JFO (DHS/DOD)

Ongoing Corrective Actions—Response Gaps

(and Responsible Agencies)

Authorities and Laws – Existing sequential national response process could be stymied by non-functioning local or state governments (White House/Congress/States) – Lack of clarity over when DOD would take the lead in the federal response effort from DHS (White House) – Limited immediate response authority for most federal agencies (White House/Congress)	**Unity of Effort** – National Incident Management System largely based on coordination vice command (DHS/States) – Divided military command structure likely even in multi-state disasters (White House/Congress/States) – Interagency and intergovernmental planning for multi-state and/or open-ended catastrophes still in its infancy (DHS/States)
Resources – Lack of US Coast Guard-like response capability on land (DHS/White House/Congress) – Resource requirements for certain open-ended catastrophes could exceed existing national capabilities (DHS/White House/Congress/State and Local Governments)	**"The Public"** – Public unprepared for multi-state catastrophe that taxes government's ability to respond quickly/effectively and/or imposes significant restrictions on personal freedoms (White House/DHS/States/Local Governments/Citizenry)

Projection: Open-ended Scenario with Ambiguous Warning (Pandemic)



Planning Factors:

- Potential requirement peak exceeds national capability
- Event end-point is undefined
- LOE includes medical and non-medical
- Red star indicates significant change to how America lives
  - Quarantine, loss of services, isolation, restriction of freedoms
- Investment vs. Reaction?

2nd-order Drilldowns

Exercise Events/Scenarios

- May 06: ARDENT SENTRY 06, POSITIVE RESPONSE 06-2
  - NORTHCOM, Joint Staff exercises, Homeland Defense and Defense Support to Civil Authorities
  - Federal, State (MI, AZ, NM), International (Canada—NORAD)
    - No JCOA collection in Canada, NM, AZ
  - Hurricane, CBRNE, Operation NOBLE EAGLE, Critical Infrastructure Protection, Pandemic Influenza
  - JCOA team: 12 collectors coordinating with JS/J7 and NORTHCOM/J7
- May-Jun 06: DHS Hurricane Preparedness Tabletops
  - FEMA Regions I-IV and VI; NORTHCOM will participate
  - ~1 ½ days per exercise, three rounds of play
  - JCOA team: 2 collectors per exercise, coordinated with NORTHCOM

Summary of Quick Look

As a result of lessons learned from Katrina, incremental changes have been made by Local, State, and Federal agencies in responding to catastrophic incidents within the Homeland. Challenges remain in prioritizing, synchronizing, and implementing these changes to achieve Unity of Results in the face of evolving expectations. In the short term, we need to focus efforts on:

- **Achieving Unity of Effort**
  - Expectations, relationships, information
- **Matching Military Capabilities to Civilian Requirements**
  - Posturing, requests, resources
- **Integrating Training and Exercises**
  - Participation, integration, periods of change

Achieving Unity of Effort

- **Observation**: Incremental changes in policies, plans, and organizational structures since Katrina are unlikely to meet high public expectations for a government response. Increased collaboration among government agencies—at all levels—is required to deliver a rapid, effective response.

- **Discussion points**:
  - Rapid response expectations—sequential response structure (constraint)
    - "More, Closer, Sooner, Safely"
    - Federal law unchanged, National Response Plan (NRP) changes not complete
    - Leaning forward to prepare for state request
  - Achieving unity of results without unity of command
    - Roles redefined—relationships evolving
    - Response will involve parallel "chains of command"
    - Disaster, attack, and pandemic—Primary Federal Agency?
  - Sharing information within NRP-based response
    - Coordinating decisions, shared situational awareness
    - Collection/assessment
    - Collaboration challenges

Matching Military Capabilities to Civilian Requirements

- **Observation**: Planning and collaboration have reduced the timeline for identifying and employing forces. A well-documented, rehearsed process is critical to force-employment in a crisis.

- **Discussion points**:
  - Posturing for immediate response
    - Response packages and Pre-scripted Mission Assignments (PSMAs)
    - Defense Coordinating Officer (DCO) training and experience
    - Supported agency's understanding of capabilities and limitations
    - Disaster, attack, and pandemic—similarities, differences
  - Managing requests in a crisis
    - PSMAs and time-critical capabilities
    - A detailed process for handling Requests for Assistance/Mission Assignments (RFA/MAs) is required
      - Includes central tracking from point of need through point of delivery
    - Simultaneous/competing needs require prioritization
  - Strategic resource allocation
    - How to balance CONUS response with global commitments?

Integrating Training and Exercises

- **Observation**: Multiple lessons learned have already shaped ongoing training events; however, there is still room for greater synchronization and participation. The rapid pace of Katrina-driven changes stresses the ability to train and exercise effectively.

- **Discussion points**:
  - Scope, participation, and senior involvement
    - DHS Table Top Exercises (TTXs) fostered pre-event State - Federal collaboration
    - Use of JFO and National simulation-cells in AS06 was win-win for DHS and DOD
    - AS06 and DHS TTX—extensive senior leadership involvement
  - Integration
    - External events inhibited blue-blue interagency play in AS06 and DHS TTX
    - Scheduling and funding affect State and National Guard participation
    - DHS, NORTHCOM, Joint Staff working to synchronize interagency exercises
    - Disaster, CBRNE, and pandemic events are not interchangeable
  - Training, exercise, and mission rehearsal in periods of change
    - Training prior to exercise is preferred to training within an exercise
    - Many changes not complete in time for Ardent Sentry or DHS TTX
    - Hurricane Season 2006 may contain unrehearsed process/structure changes

Other Military Response Authorities

- Coast Guard Authorities
  - Title 14, Sections 2, 88, and 141 of U.S. Code – The Coast Guard shall develop, establish, maintain and operate Search and Rescue facilities and may render aid to distresses
  - International Convention on Maritime Search and Rescue of the International Maritime Organization (IMO). Assigns Search and Rescue Regions (SRRs). Generally include all navigable waters subject to the jurisdiction of the US and extend into international waters in the Atlantic, Pacific and Gulf of Mexico
  - Authority is also covered in several others sources. Even if no SAR issues USCG would be allowed entry under 33 CFR, CERCLA, and OPA 90 for oil and chemical spill response

- US Corps of Engineers Authorities
  - Public Law 84-99, Title 33 of U. S. Code (Flood Control)
    - Broad guidance, to include emergency assistance, repairs to levees, repair materials, search and rescue, technical advice, and post flood response
  - National Response Plan, designated lead for Emergency Support Function (ESF) #3
    - Tasks include restoration of critical facilities and services, water supply and ice, structural evaluation, and debris clearing

Obstacles to Collecting and Sharing Homeland Information

- **Information Interoperability**
  - Homeland Data Sharing Program—designed to provide common information elements and data standardization—is incomplete
  - DOD joint task forces and COCOM headquarters are still geared toward SIPRNET-based coordination and C2
  - Only the GIS portion of the unclassified interagency/state COP is in place
- **Collection Tools**
  - Imagery is the only technical collection means with an established state/local dissemination policy (Standard Proper Use Memo)
  - ARNORTH scout teams were not practiced in Ardent Sentry 2006
- **Collection Processes/Framework**
  - DHS Incident Awareness and Assessment (IAA) architecture/guidance has not yet been incorporated in the NRP
  - NGB has not codified the new Title 10/National Guard collection requirement process

Obstacles to Matching Military Capabilities with Civilian Requirements

- DSCA Requests for Assistance/Requests for Forces (RFA/RFF) process is missing certain elements
  - A detailed SOP for handling Requests for Assistance/Mission Assignments (RFA/MAs)
  - Central tracking of forces/resources from point of need to point of delivery
  - Clear mechanism for prioritizing simultaneous/competing needs among states and regions
  - Funding sources for forces to "lean forward" (pre-event)
- Pre-Scripted Mission Assignments (PSMA) may not be sufficient for certain time-critical capabilities
  - Incident Awareness and Assessment, aero-medical evacuation
- Closer collaboration has produced better visibility into National Guard and Title 10 force deployments, but there is not yet a single DSCA force provider/process
- Strategic resource allocation is an important concern
  - How to balance CONUS response with global commitments?

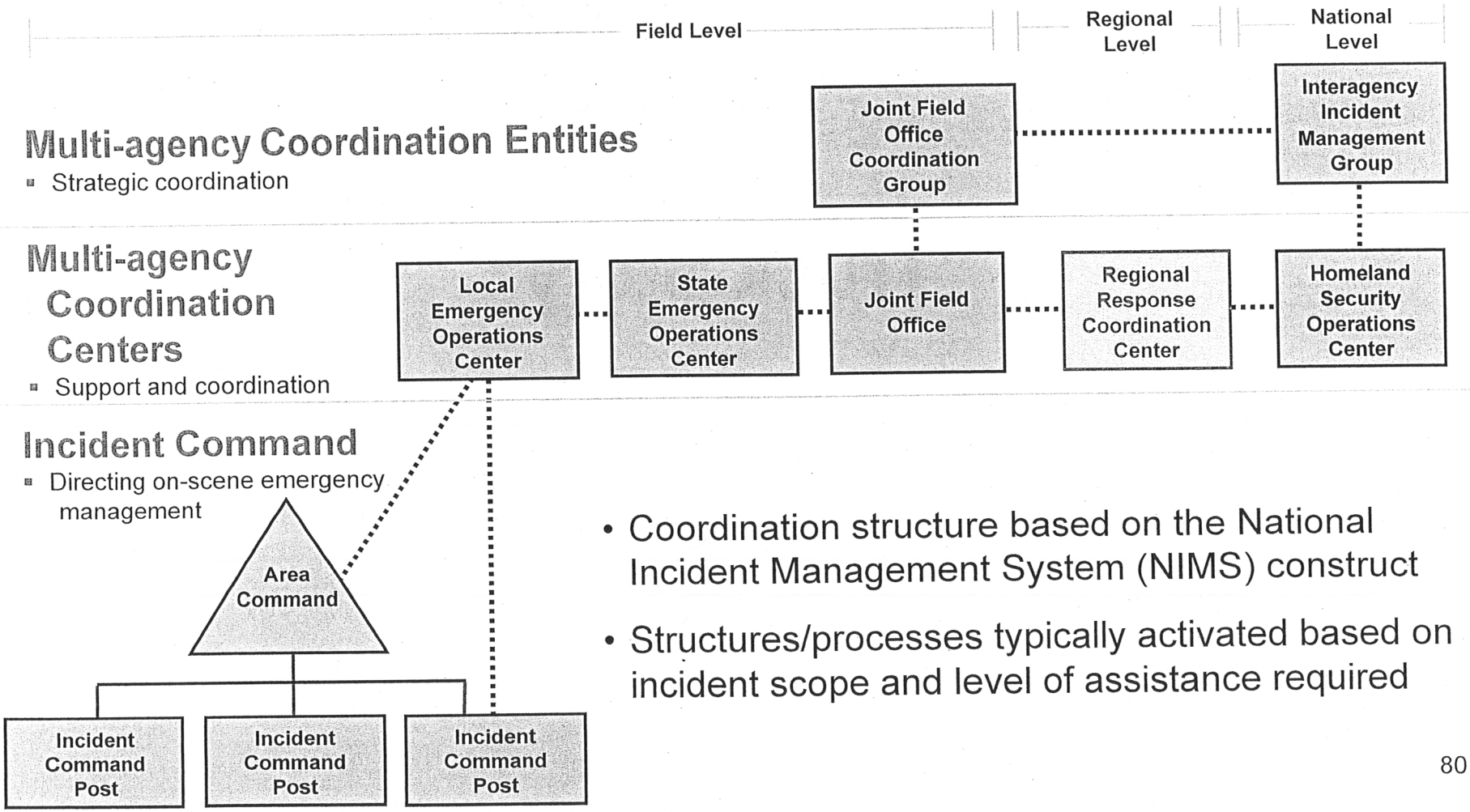
Obstacles to Integrating Training and Exercises

- Traditional integration issues include
  - Scheduling and funding of State and National Guard participants
  - Synchronization of DHS, NORTHCOM, NGB and Joint Staff interagency exercises—many players, limited time
  - Unique aspects of disaster, CBRNE, and pandemic events
  - Training prior to exercise vice training within an exercise
- Integration issues exacerbated by recent disaster response activities/changes
  - External events inhibited blue-blue interagency play in AS06 and DHS TTX
  - Many changes were not complete in time for Ardent Sentry or DHS TTX
- As of late 2006, improvements are moving forward
  - These include DOD training programs for civilian planners, homeland defense education and research
  - DHS and NORTHCOM completed plan to synchronize National Exercise Program, DOD exercise events
  - Ardent Sentry 07 increased interagency, Title 10, National Guard, state, and local interaction in consequence management scenario

"Truck Story"

National Response Plan Coordination Structure

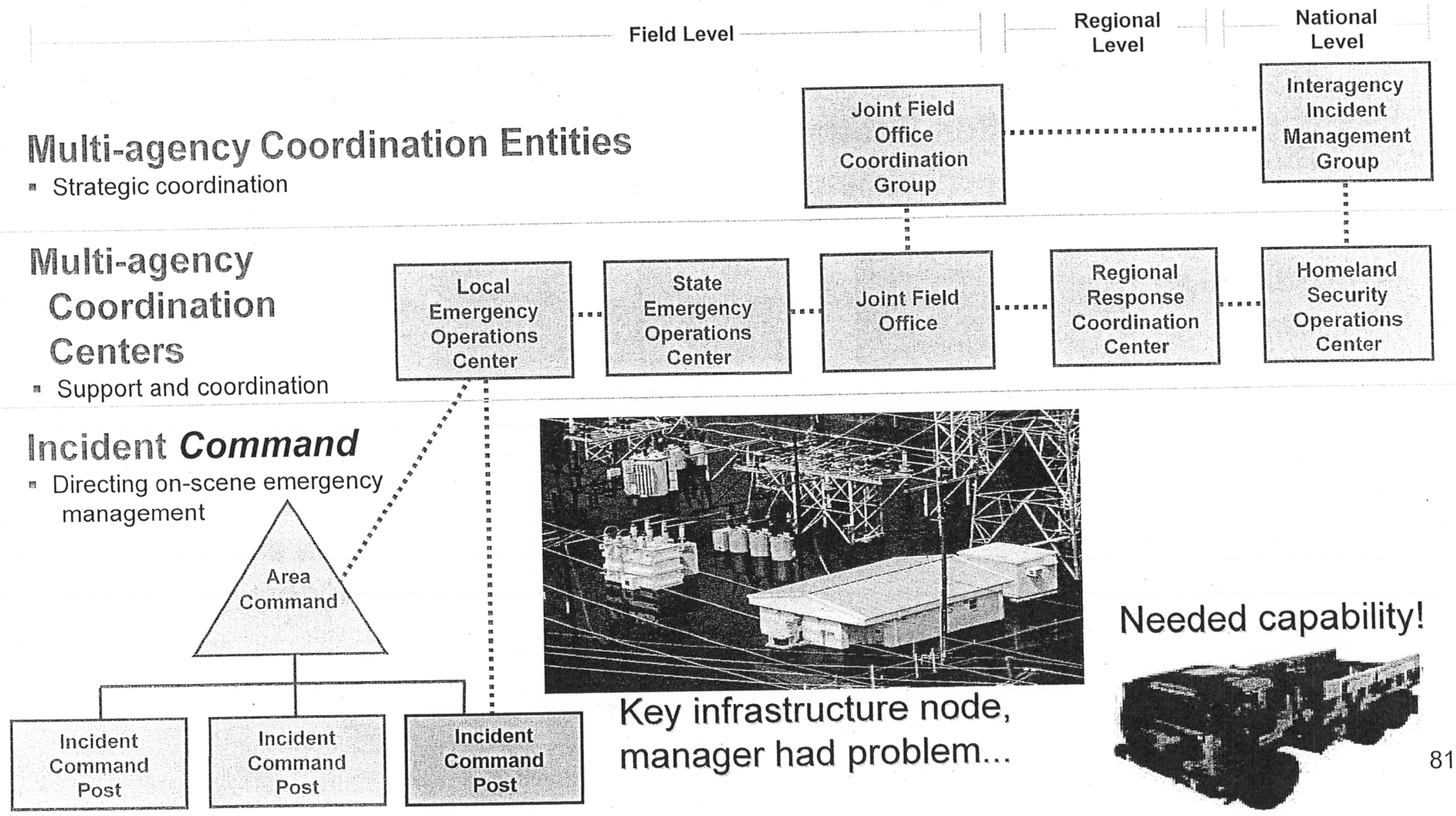
National Incident Management System Framework



- Coordination structure based on the National Incident Management System (NIMS) construct
- Structures/processes typically activated based on incident scope and level of assistance required

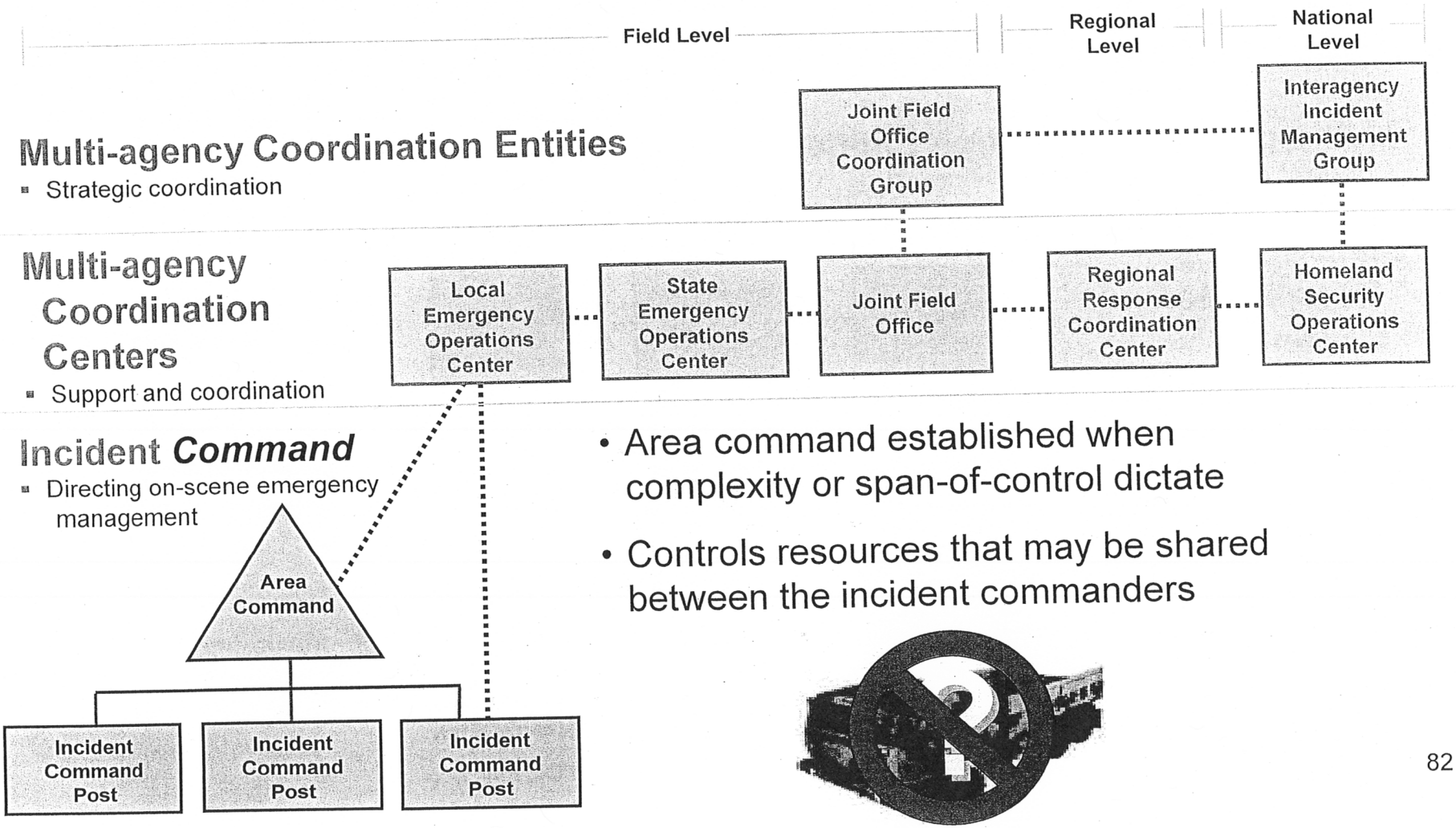
National Response Plan Coordination Structure

National Incident Management System Framework



National Response Plan Coordination Structure

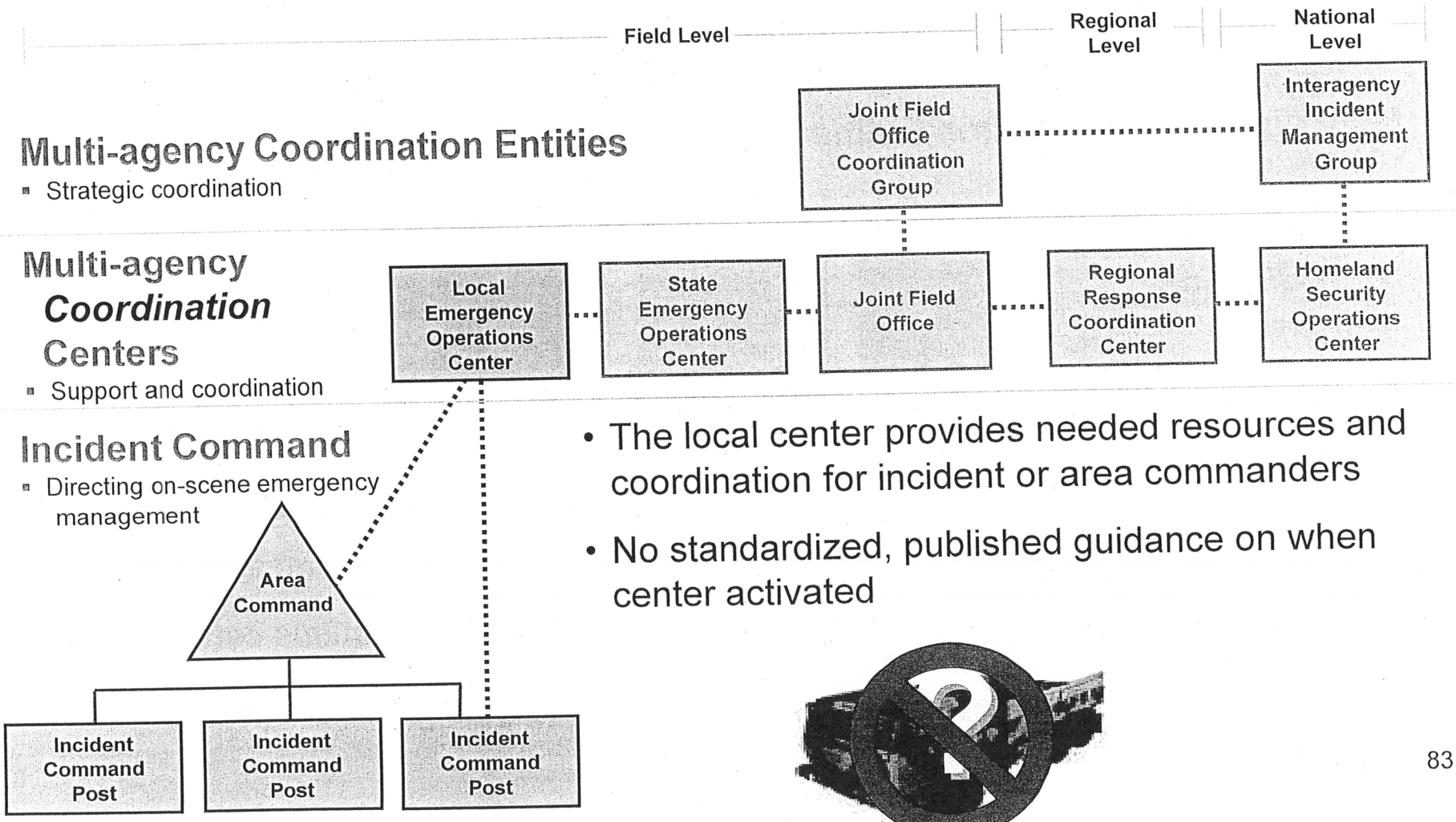
National Incident Management System Framework



- Area command established when complexity or span-of-control dictate
- Controls resources that may be shared between the incident commanders

National Response Plan Coordination Structure

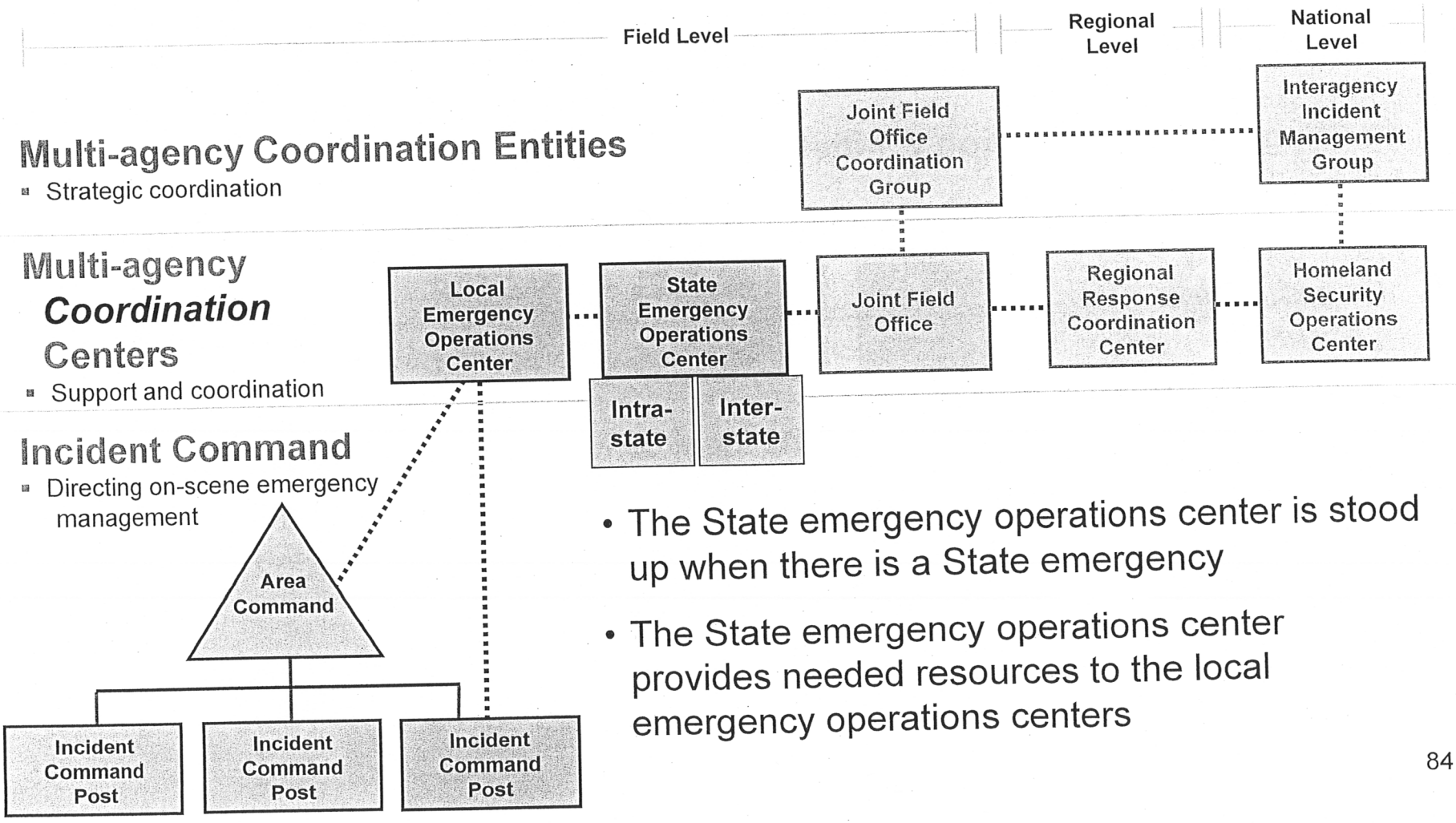
National Incident Management System Framework



- The local center provides needed resources and coordination for incident or area commanders
- No standardized, published guidance on when center activated

National Response Plan Coordination Structure

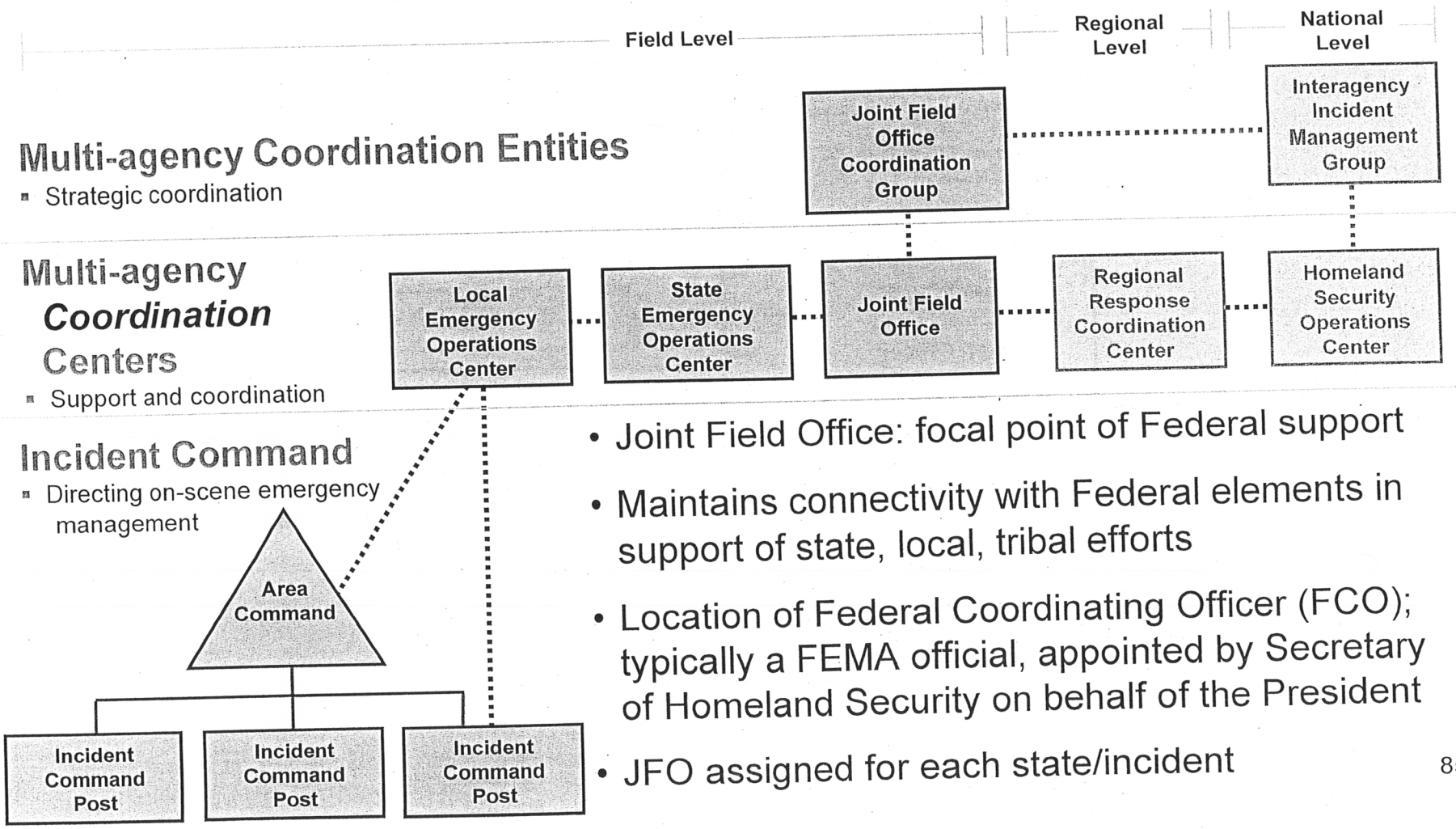
National Incident Management System Framework



- The State emergency operations center is stood up when there is a State emergency
- The State emergency operations center provides needed resources to the local emergency operations centers

National Response Plan Coordination Structure

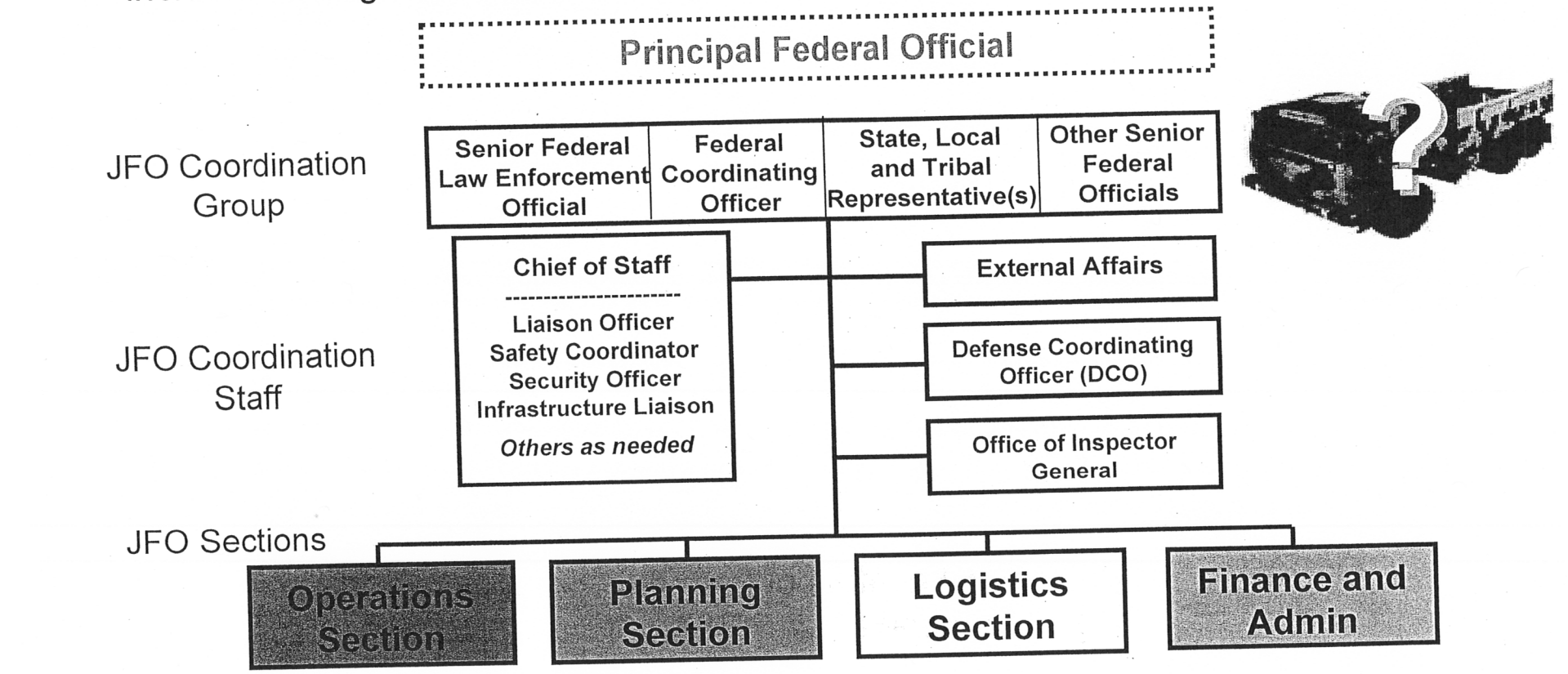
National Incident Management System Framework



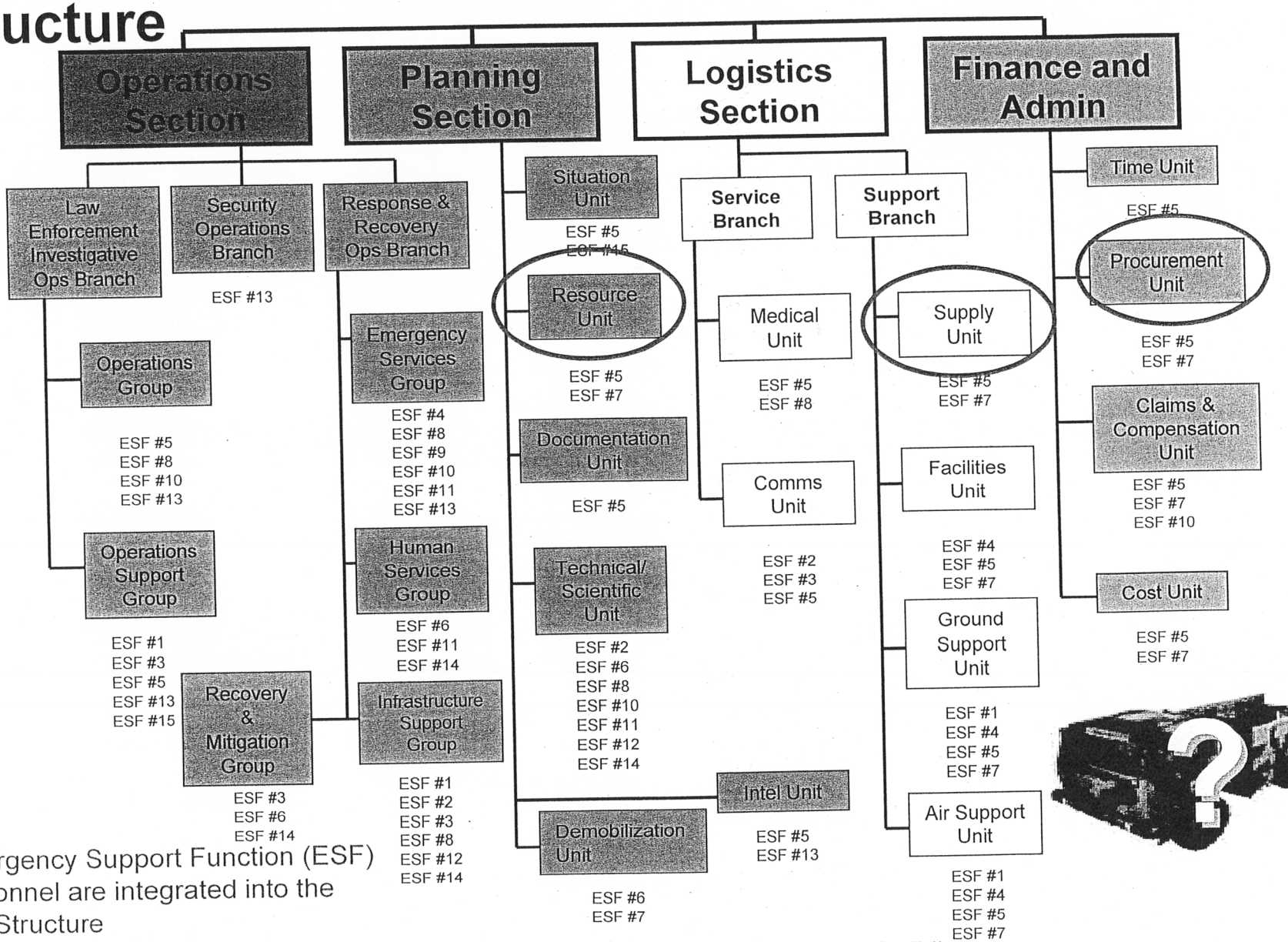
- Joint Field Office: focal point of Federal support
- Maintains connectivity with Federal elements in support of state, local, tribal efforts
- Location of Federal Coordinating Officer (FCO); typically a FEMA official, appointed by Secretary of Homeland Security on behalf of the President
- JFO assigned for each state/incident

Joint Field Office (JFO) and JFO Coordination Group

– JFO is the focal point for coordination of Federal support to on-scene incident management efforts



Recommended Joint Field Office Structure

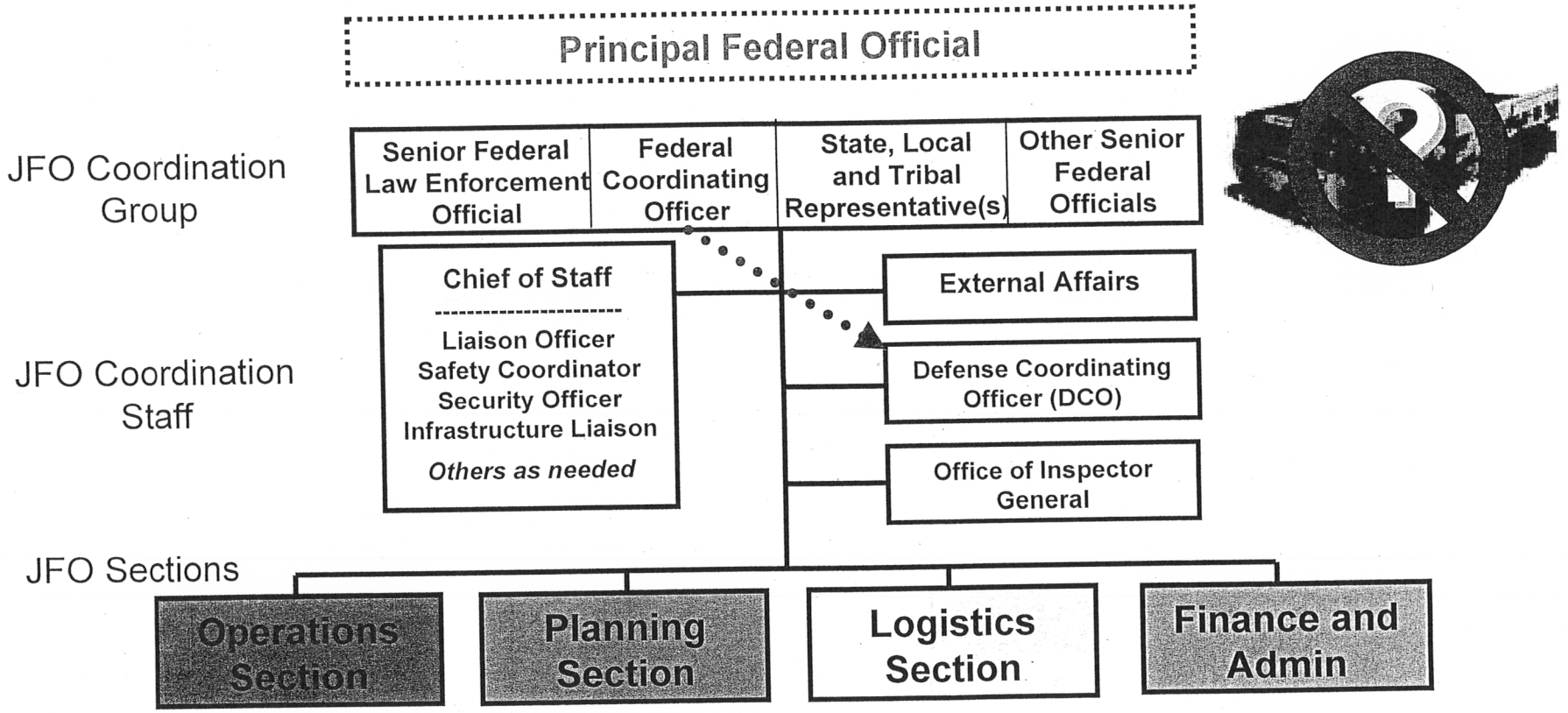


Emergency Support Function (ESF) personnel are integrated into the ICS Structure

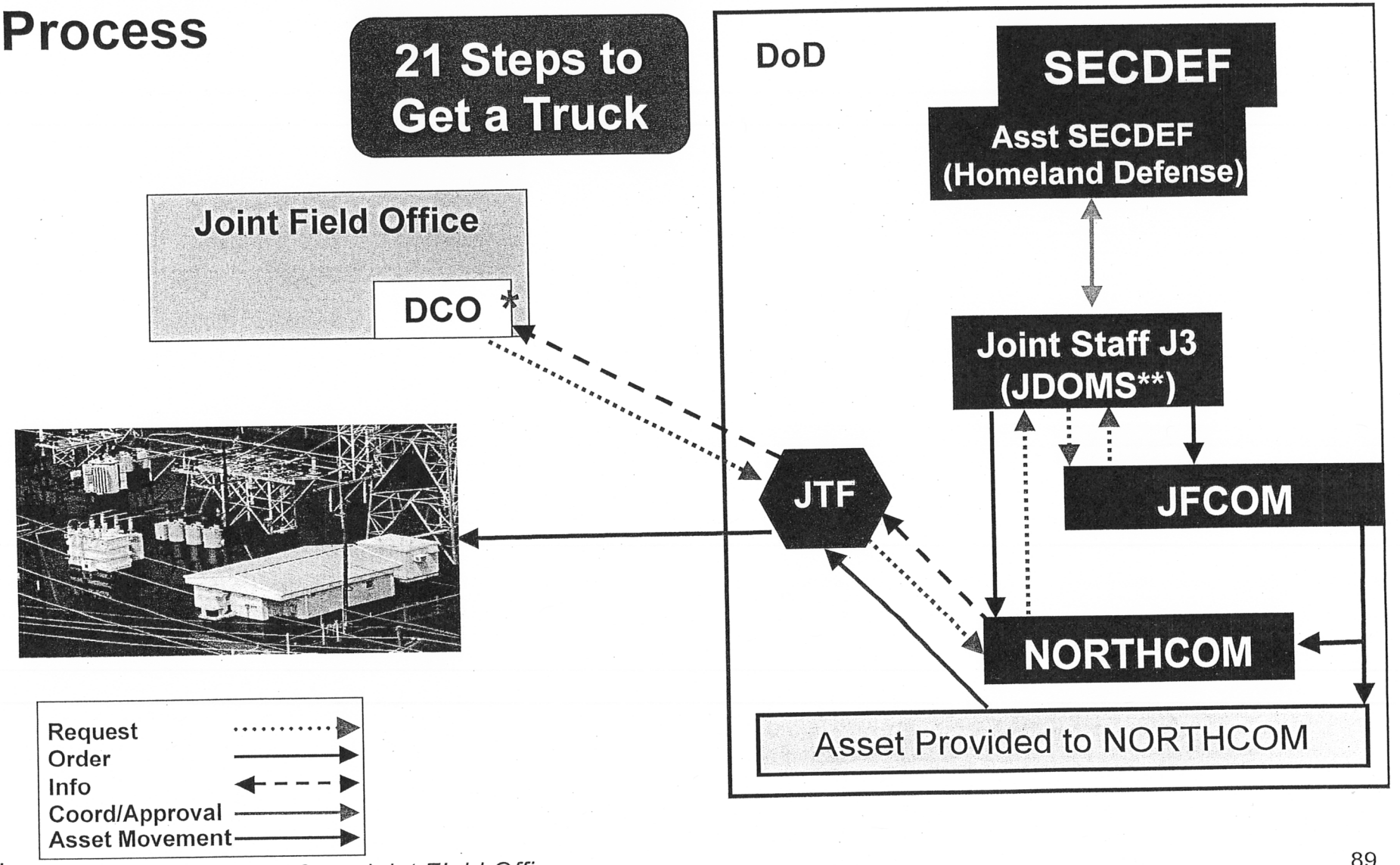
Source: Draft Joint Field Office Standard Operating Procedures (version 7.1)

Joint Field Office (JFO) and JFO Coordination Group

– JFO is the focal point for coordination of Federal support to on-scene incident management efforts



Request for Assistance (RFA) Process

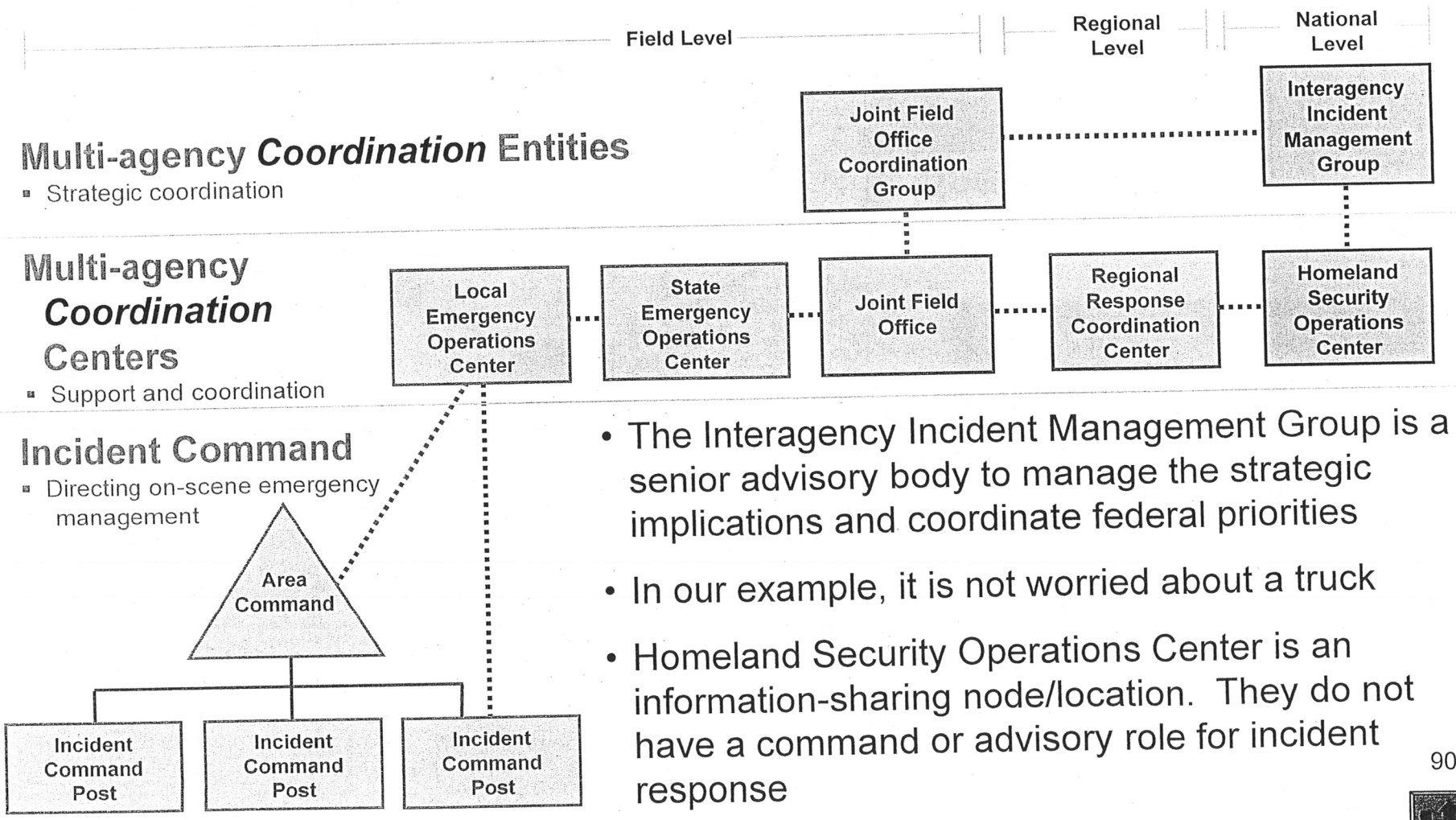


* *DCO validates request from Joint Field Office*

** *Joint Department of Military Support (JDOMS)*

National Response Plan Coordination Structure

National Incident Management System Framework



- The Interagency Incident Management Group is a senior advisory body to manage the strategic implications and coordinate federal priorities
- In our example, it is not worried about a truck
- Homeland Security Operations Center is an information-sharing node/location. They do not have a command or advisory role for incident response

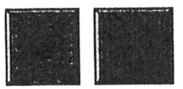
Truck Story Drilldown Slides

KEY DEFINITIONS

Incident of National Significance: An incident in which any one of the following four conditions applies: (1) a Federal department or agency acting under its own authority has requested the assistance of the Secretary of the Department of Homeland Security; (2) the resources of State and local authorities are overwhelmed and Federal assistance has been requested by the appropriate State and local authorities; (3) more than one Federal department or agency has become substantially involved in responding to the incident; or (4) the Secretary of the Department of Homeland Security has been directed to assume responsibility for managing the domestic incident by the President. **(NRP)**

Presidentially Declared Disaster: Any natural catastrophe (including any hurricane, tornado, storm, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought), or, regardless of cause, any fire, flood, or explosion, in any part of the United States, which in the determination of the President causes damage of sufficient severity and magnitude to warrant major disaster assistance under this Act to supplement the efforts and available resources of States, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby. **(Stafford Act)**

Presidentially Declared Emergency: Any occasion or instance for which, in the determination of the President, Federal assistance is needed to supplement State and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States. This declaration authorizes Federal assistance via FEMA for amounts up to $5 million. **(Stafford Act)**



DEFINITIONS FROM THE STAFFORD ACT

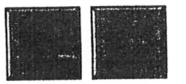
Presidentially Declared Disaster: **Any natural catastrophe** (including any hurricane, tornado, storm, high water, wind driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought), or, regardless of cause, any fire, flood, or explosion, in any part of the United States, **which in the determination of the President causes damage of sufficient severity and magnitude to warrant major disaster assistance under this Act to supplement the efforts and available resources of States, local governments**, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby. (Stafford Act)

Presidentially Declared Emergency: **Any occasion** or instance for which, **in the determination of the President, Federal assistance is needed to supplement State and local efforts and capabilities** to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States. (Stafford Act)

Limitation on Emergency power:

"… Except as provided in paragraph (2), total assistance provided under this title [42 U.S.C. §§ 5191 et seq.] for a single emergency shall not exceed $5,000,000.

Additional assistance:
The limitation…may be exceeded when the President determines that-- continued emergency assistance is immediately required; there is a continuing and immediate risk to lives, property, public health or safety; and necessary assistance will not otherwise be provided on a timely basis."

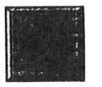


DEFINITIONS (cont)

Catastrophic Incident: Any natural or manmade incident, including terrorism, that results in extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, national morale, and/or government functions. A catastrophic incident could result in sustained national impacts over a prolonged period of time; **almost immediately exceeds resources normally available to State, local, tribal, and private-sector authorities** in the impacted area; and significantly interrupts governmental operations and emergency services to such an extent that national security could be threatened. All catastrophic incidents are Incidents of National Significance. (NRP)

The April 2005 Final Draft of the National Response Plan Catastrophic Incident Supplement (NRP-CIS) states: "Immediately upon recognition that a domestic jurisdiction or region has suffered a catastrophic mass victim/mass evacuation incident, the Secretary of Homeland Security will declare an Incident of National Significance, direct implementation of the NRP-CIS, and direct initiation of the automatic response actions reflected in the Execution Schedule (of the NRP-CIS)".

A Catastrophic Incident is further characterized as "resulting in tens of thousands of casualties (dead, dying and injured) and producing tens of thousands of evacuees and/or affected-in-place." (Draft NRP-CIS)



Emergency Operations Centers (EOC)—State of Louisiana Example

The declaration of an emergency or disaster by the governor shall activate the state's emergency response program under the command of the [Louisiana] Director of the Office of Homeland Security and Emergency Preparedness (hereafter "Director"). The director **shall direct the state of Louisiana's emergency and/or disaster operations**.

The director shall control the activation and/or implementation of the [state] **Emergency Operations Plan (EOP)** and the conclusion and/or deactivation of the EOP.

The director shall also **control the activation and deactivation of the State Emergency Operations Center (EOC).**

The activation of the EOC shall constitute the implementation of the EOP.

The EOC is a protected site from which public officials issue warnings and exercise direction and control **during an emergency/disaster**. It is equipped and staffed to provide support in coordinating and guiding emergency/disaster operations.

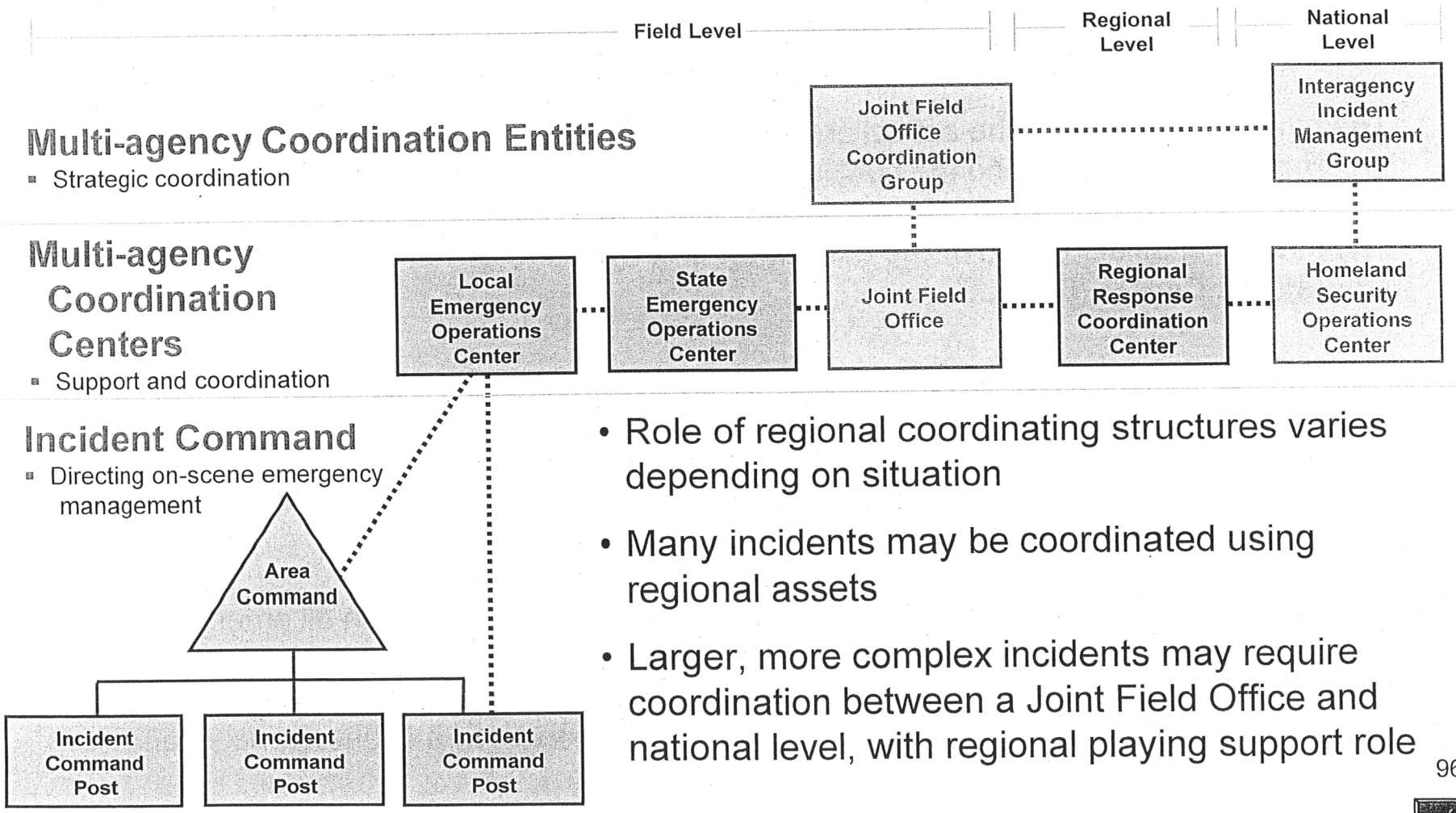
The state has designed, built, equipped and staffed an EOC from which all emergency activities will be managed. **The state requires all parish governments to have EOCs from which the parishes can manage emergency operations at the parish level and communicate with the state EOC to ensure close cooperation** in emergencies and disasters.

Sources: *Louisiana Emergency Operations Plan*, April 2005, and Title 29, LA State Code



National Response Plan Coordination Structure

National Incident Management System Framework



- Role of regional coordinating structures varies depending on situation
- Many incidents may be coordinated using regional assets
- Larger, more complex incidents may require coordination between a Joint Field Office and national level, with regional playing support role

Emergency Support Functions (ESFs)

Federal (per NRP)	Coordinator
ESF 1 - Transportation	Dept of Transportation (DOT)
ESF 2 - Communications	Dept of Homeland Sec (DHS)
ESF 3 - Public Works and Engineering	**DoD—US Army Corps of Engineers**
ESF 4 - Firefighting	Dept of Agriculture (USDA)
ESF 5 - Emergency Management	DHS
ESF 6 - Mass Care, Housing, and Human Services	DHS
ESF 7 - Resource Support	Gen Svs Administration (GSA)
ESF 8 - Public Health and Medical Services	Dept Health and Human Services (HHS)
ESF 9 - Urban Search and Rescue	DHS
ESF 10 - Oil and Hazardous Materials Response	DHS—US Coast Guard
ESF 11 - Agriculture and Natural Resources	USDA
ESF 12 - Energy	Dept of Energy (DOE)
ESF 13 - Public Safety and Security	DHS
ESF 14 - Long-Term Community Recovery and Mitigation	DHS
ESF 15 - External Affairs	DHS



Emergency Support Functions (ESFs)

Federal (per NRP)

DOT	ESF 1 - Transportation
DHS	ESF 2 - Communications
DoD	ESF 3 - Public Works and Engineering
USDA	ESF 4 - Firefighting
DHS	ESF 5 - Emergency Management
DHS	ESF 6 - Mass Care, Housing, and Human Services
GSA	ESF 7 - Resource Support
HHS	ESF 8 - Public Health and Medical Services
DHS	ESF 9 - Urban Search and Rescue
DHS	ESF 10 - Oil and Hazardous Materials Response
USDA	ESF 11 - Agriculture and Natural Resources
DOE	ESF 12 - Energy
DHS	ESF 13 - Public Safety and Security
DHS	ESF 14 - Long-Term Community Recovery and Mitigation
DHS	ESF 15 - External Affairs

State of Louisiana

ESF 1 - Transportation
ESF 2 - Communications
ESF 3 - Public Works and Engineering
ESF 4 - Firefighting
ESF 5 - Emergency Management
ESF 6 - Mass Care, Housing, and Human Services
ESF 7 - Resource Support
ESF 8 - Public Health and Medical Services
ESF 9 - Search and Rescue
ESF 10 - Oil Spill, Hazardous Materials, and Radiological
ESF 11 - Agriculture
ESF 12 - Energy
ESF 13 - Public Safety and Security
ESF 14 - Community Recovery, Mitigation, and Economic Stabilization
ESF 15 - Emergency Public Information



Emergency Management Assistance Compact (EMAC)



- The Emergency Management Assistance Compact was ratified by Congress and signed into law (Public Law 104-321) in 1996. It was the first national disaster-relief compact to be ratified by Congress since the Civil Defense Compact of 1950. All members must pass state legislation approving their participation in the compact.

- The compact is administered by the National Emergency Management Association (NEMA).

- The Emergency Management Assistance Compact is neither a federal agency nor part of the federal government. It is an agreement among 49 states, the District of Columbia, Puerto Rico and the Virgin Islands, to provide assistance across state lines when a disaster occurs.

- California was the 49th state to join the Emergency Management Assistance Compact on 12 Sept 2005. Currently, Hawaii is the only state that is not a member of the Emergency Management Assistance Compact.

- The governor of the affected area must first declare a state of emergency, and then that state must request the help it needs. The state request triggers the response from other Emergency Management Assistance Compact member states and sets the system of coordination and deployment in motion. Established protocols allow reimbursement to all assisting states. The compact also has the procedures in place to resolve liability issues.

Responsibilities of Principal Federal Official (PFO)

- Represent Secretary of homeland Security as lead Federal official
- Ensure overall coordination of Federal domestic incident management and resource allocation activities
- Ensure seamless integration of federal activities in support of and In coordination with State, local, and tribal requirements
- Provide strategic guidance to Federal entities
- *Facilitate* interagency *conflict resolution* as necessary
- Serve as primary *point of contact for* Federal *interface* with State, local and elected/appointed officials, the media and private sector
- Provide real time incident information to the Secretary of Homeland Security
- *Coordinate* response resource needed between multiple incidents as necessary
- *Coordinate* overall Federal strategy locally to ensure consistency of Federal interagency communication to the public
- Ensure adequate connectivity is maintained between the JFO and the HOSC, EOC, and relevant elements of the private sector
- Participate in ongoing steady-state preparedness efforts
- PFO may deploy with the Domestic Emergency Support Team
- PFO and supporting staff conform to the deployment timelines
- PFO must complete a formal training program



Responsibilities of Federal Coordinating Officer (FCO)

- Conduct an initial appraisal of the types of assistance most urgently needed
- Coordinate timely delivery of Federal assistance to affected State, local, governments and disaster victims Support the PFO when one is designated
- *Serve as the Disaster Recovery manager* to administer the financial aspects of assistance authorized under the Stafford Act
- Work in partnership with the State Coordinating Officer and the Governor's authorized Representative to execute all necessary documents for Federal assistance on behalf of the State
- *Take actions consistent with the authority delegated* to him/her as deemed necessary to assist local citizens and public officials to obtain assistance



Emergency Support Functions (ESFs)

Federal (per NRP)	Coordinator
ESF 1 - Transportation	Dept of Transportation (DOT)
ESF 2 - Communications	Dept of Homeland Sec (DHS)
ESF 3 - Public Works and Engineering	**DoD—US Army Corps of Engineers**
ESF 4 - Firefighting	Dept of Agriculture (USDA)
ESF 5 - Emergency Management	DHS
ESF 6 - Mass Care, Housing, and Human Services	DHS
ESF 7 - Resource Support	Gen Svs Administration (GSA)
ESF 8 - Public Health and Medical Services	Dept Health and Human Services (HHS)
ESF 9 - Urban Search and Rescue	DHS
ESF 10 - Oil and Hazardous Materials Response	DHS—US Coast Guard
ESF 11 - Agriculture and Natural Resources	USDA
ESF 12 - Energy	Dept of Energy (DOE)
ESF 13 - Public Safety and Security	DHS
ESF 14 - Long-Term Community Recovery and Mitigation	DHS
ESF 15 - External Affairs	DHS

- Holding Pen

Summary

- Timely decisions are critical to effective response
  - Shared situational awareness, multi-jurisdiction collaboration are key
- Leadership must prepare to respond when incident command/management elements are incomplete or non-functional
  - Both *authority to act* and *how to respond* in time-critical environment
- Ongoing corrective actions must continue in order to deal with a warned event
  - C2 relationships and communications interoperability
  - Federal "force provider" process
  - Cross-government planning, training and exercise, from strategic through tactical
- Nation has not fully addressed events that are indefinite (in time/scope) or exceed resources (e.g. Pandemic)
  - Early intervention can have major impact
  - Public preparedness especially important

- "Chicklet" Details

Federal Plans

- **Camille (Insufficient Data)**
  - "…societal responses to hurricanes made in the face of an approaching storm and in its immediate aftermath are most effective when they are based upon decision processes developed over the long term."
  - With Camille, the preparations for the event and the response were based on processes put in place long before the storm made landfall. Coordination between government agencies as well as with state and local officials was enhanced because of preexisting plans.
  - Source: Thirty Years After Hurricane Camille: Lessons Learned, Lessons Lost by Pielke, Jr., Simonpietri, and Oxelson, 12 July 1999

- **San Francisco Earthquake, 1989 (Insufficient Data)**
  - "The agency [FEMA] proved entirely unprepared for catastrophic disasters like Hurricanes Hugo and Andrew and the Loma Prieta earthquake, which shattered state and local capabilities." (FEMA Daniels report, 2000)

- **Hugo** R
  - Dissatisfaction with federal response to Hugo, led by FEMA, led to the drafting of the Federal Response Plan. (GAO Report, 1993)
  - "Federal law, FEMA regulations, and FEMA policy limited the agency's ability to anticipate disasters for which there was adequate warning. Although FEMA officials were in place 24 hours prior to landfall of both Hurricanes Hugo and Andrew, resources took much longer to deploy. Sufficient quantities of food and clothing did not arrive in Charleston until six days after Hugo's landfall." (GAO Report, 1993)

- **Andrew** R
  - Federal Response Plan (FRP) was not fully implemented (JULLS #91732-40032, JTF ANDREW)
  - FRP did not have an Emergency Response Function for Security. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - Lack of Joint Disaster Relief Doctrine (JULLS #91623-75230, CALL)
  - Unclear assignment of responsibility for centralized management of damage assessment (JULLS #92556-15571, JTF ANDREW)
  - Greater military involvement required than envisioned in the FRP (JULLS #91766-03686, JTF ANDREW)
  - Hurricane Andrew was FEMA's first opportunity to test its Federal Response Plan… and the test raised questions about the plan's workability. (GAO/NSIAD-93-180, 1993)

Federal Plans

- **9/11/2001 Attacks** (R)
  - "The civilian and military defenders of the nation's airspace—FAA and NORAD—were unprepared for the attacks launched against them. Given that lack of preparedness, they attempted and failed to improvise an effective homeland defense against an unprecedented challenge."
  - "Congress gave little guidance to executive branch agencies on terrorism, did not reform in any significant way to meet the threat…"
  - "The DOD and its oversight committees should regularly assess the adequacy of NORTHCOM and the DHS. They must have clear delineation of roles, planning to defend against military threats to the homeland."
  - Source: "9/11 Commission Report", August 2004
- **Charley / Frances / Ivan / Jeanne 2004**
  - No authoritative data has been identified that documents lessons associated with federal plans

Local/State Plans

- **Camille**
  - No assessment data found for this area.
  - With Camille, the preparations for the event and the response were based on processes put in place long before the storm made landfall. Coordination between government agencies as well as with state and local officials was enhanced because of preexisting plans.
  - Source: Thirty Years After Hurricane Camille: Lessons Learned, Lessons Lost by Pielke, Jr., Simonpietri, and Oxelson, 12 July 1999)

- **Hugo** (Y)
  - Hurricane Hugo exposed "the need to provide state and local governments with training specifically geared towards developing such necessary skills for responding to catastrophic disasters as assessing damage and estimating the amount of mass care needs." (GAO Report, 1993)
  - The lack of or inadequate standard operating procedures hampered State Standard Operating response and recovery operations in three states-California, South Procedures Hampered Carolina, and the Virgin Islands. Standard operating procedures are Response and Recovery detailed procedures for implementing tasks, such as managing an emergency operations center or reimbursing local governments for public assistance projects. In South Carolina, state officials managing the public assistance program had to develop standard operating procedures as they carried out these functions and, as a result, they spent valuable time developing procedures instead of providing assistance. Lack of or inadequate standard operating procedures for state emergency operations centers in California, South Carolina, and the Virgin Islands contributed to coordination difficulties, such as keeping track of assistance requests. (GAO Report, 1991)
  - Immediately after Hurricane Hugo struck, two state emergency operations centers were opened in the capital. The operation of two separate emergency centers was contrary to the state operations plan, and a duplication of effort. According to a state emergency preparedness official, five county requests to the state for assistance were unfilled because of coordination problems between the two centers. (GAO Report, 1991)
  - Failure of South Carolina to perform lane reversals for freeways caused significant delays and traffic jams. South Carolina fixed this after Hurricane Floyd. (Congressional testimony to Senate committee on Commerce, Science, and Transportation, Subcommittee on Disaster Prevention and Prediction, 2005)
  - Virgin Islands had virtually no emergency planning capability – resulted in inability to act as first responder. (GAO Report, 1991)

- **Andrew** (Y)
  - Strengthen plans for evacuation, shelter, and post-disaster response and recovery (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)

Local/State Plans (cont'd)

- **Charley / Frances / Ivan / Jeanne 2004** (Y)
  - [Florida DOH] was reasonably well prepared for a single incident; although, in retrospect, much more should have been accomplished prior to onset of the 2004 hurricane season
  - The state's [Florida] Comprehensive Emergency Management Plan served as a guide for disaster management and provided a foundation for a unified approach to the catastrophic events
  - The governor's [Florida] executive orders were timely and effective (3 days prior to landfall)
  - Special Needs Shelter plans not sufficiently validated
  - Source: Florida Department of Health, Office of Inspector General, 2004 Hurricane Season After Action Report, March 2005.
  - A number of municipalities indicated that they did not have emergency plans, that they were out-of-date, or that they had other inadequacies. In addressing the recommended actions proposed for this issue, … the federal requirement is that all local governments have an emergency plan in place by October 1, 2006 that is compliant with the requirements of the National Incident Management System (NIMS) and is consistent with the National Response Plan (NRP).
  - For several jurisdictions and organizations, the 2004 hurricane season was a challenge to maintain operations in spite of post-impact conditions, and specifically the protracted loss of power and telephone communications. In some cases, a COOP-type response had to be implemented "on the spot," and many organizations would have benefited if a COOP had been in place.
  - Under Florida law, residential health care facilities are required to have comprehensive emergency plans that include facility evacuation. During 2004, several difficulties with these plans emerged, including the following:
    - Mutual aid facilities for sheltering residents/patients were close enough to also be impacted by the events
    - Transportation resources fell short
    - Facilities did not initiate evacuations in a timely manner
    - Many did not have standby power and were severely affected by the prolonged power outage
    - County and municipal management of and assistance to these facilities was more resource intensive than anticipated
  - Source: 2004 Hurricane Season "After Action Report" Lessons Learned Regarding Improved County and Municipal Hurricane Emergency Procedures (Volusia County, FL), June 2005.

Local/State Plans (cont'd)

- **9/11/2001 Attacks**
  - No authoritative assessment data found for this area
- **San Francisco Earthquake, 1989** (Y)
  - City's operational concept did not include the Incident Command System for the Emergency Operations Center although it was used by both Police and Fire (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - The system in place to provide resources to the local jurisdiction seemed cumbersome and ineffective. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - More formalized and detailed damage assessment procedures are being developed for use by the police department in the future. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - No one in the City foresaw the need to relocate 12 departments… nor did anyone realize what a massive process it would be to apply for and receive aid. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - Plans which called for helicopter transportation from Marin County did not work. (Report on the Operations of the San Francisco Fire Department following the Earthquake and Fire of October 17, 1989)
  - Plans for use of the commercial telephone system for personnel recall should be examined. (Report on the Operations of the San Francisco Fire Department following the Earthquake and Fire of October 17, 1989)
  - Plans should be developed to provide disaster supplies to all Fire department facilities for the support of personnel during long-term emergencies. (Report on the Operations of the San Francisco Fire Department following the Earthquake and Fire of October 17, 1989)

Evacuation Operations

- **Camille** (Y)
  - The wide range of possible landfall locations greatly complicated preparation efforts…By official estimates, 81,000 out of 150,000 people in the evacuation area were moved to safety. In the early hours of Sunday morning, 18 hours before landfall, some residents began boarding up homes and businesses, and a trickle of vehicles moved north. (ESSA, 1969a). As the threat to the low-lying coastline became evident, the trickle of evacuees became a flood. People hastily loaded what few belongings they could carry and fled.
  - In the hours immediately prior to landfall, evacuation was impossible due to a number of low-lying (eventually swamped) bridges. Local officials appeared on radio and television stations to point out the danger and to plead with people reluctant to abandon their homes (ESSA, 1969a). Police and Civil Defense officials went through the areas of special hazard to individually contact them. The need to remove everyone from the tidal beaches was urgent and, in at least one case, arrests were made in a desperate move to save lives (ESSA, 1969a).
  - Camille occurred when there were many fewer people in vulnerable coastal locations. Consider that only 150,000 people were ordered to evacuate during Camille's approach, this compares with more than 750,000 ordered to evacuate when Andrew approached south Florida in 1992.
  - Source: Thirty Years After Hurricane Camille: Lessons Learned, Lessons Lost by Pielke, Jr., Simonpietri, and Oxelson, 12 July 1999

- **Hugo** (Y)
  - State and local governments and voluntary relief agencies that are responsible for immediately responding to disasters fulfilled their specific roles. For example, they evacuated citizens before the hurricane struck and provided emergency services, such as food and shelter. Federal agencies also participated in these activities by assisting states and local agencies. (GAO Report, 1991)
  - Failure of SC to perform lane reversals for freeways caused significant delays. SC fixed this after Hurricane Floyd. (Congressional testimony to Senate committee on Commerce, Science, and Transportation, Subcommittee on Disaster Prevention and Prediction, 2005)
  - Evacuation rate about 65% in coastal counties. (Quick Response Report #128 - SOUTH CAROLINA'S RESPONSE TO HURRICANE FLOYD, University of South Carolina, 2000)

- **Andrew** (R)
  - Improve evacuation planning (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - Florida and its counties adopt plans tailored to minor, major, and catastrophic disasters. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)

Evacuation Operations (cont'd)

- **Charley / Frances / Ivan / Jeanne 2004** (G)
  - In spite of lengthy delays, we [Mississippi] consider the evacuation a success because 10 hours prior to Ivan's landfall, traffic counts had fallen to below normal levels.
  - Better coordination required with law enforcement along evacuation routes
  - There is currently no reliable and accurate regional or national system to monitor real-time traffic counts along major evacuation routes (Data required to prioritize routes and open shelters)
  - Source: Mississippi Emergency Management Agency, Hurricane Ivan After Action Report, December 2004.
  - Generally most individuals felt the evacuations went well, many acknowledged several difficulties regarding the reentry into evacuated areas. The reentry process is one clearly requiring inter-jurisdictional and inter-organizational coordination and cooperation. Indications of difficulties during the 2004 season with the reentry process included:
    - Evacuees being allowed to return to areas with significant damages
    - Shelterees, including people with special needs, being released to damaged homes without power, but not allowed back into shelters
    - Sudden, and for some, unexpected decisions to de-activate shelters
    - Difficulties in consolidation of shelters
    - Managing the reentry processes and unique difficulties, e.g., the elderly, homeless, transportation resources, untimely closing of government offices, and similar
    - Lack of effective coordination among separate jurisdictions of actions allowing reentry and imposing curfews
  - Source: 2004 Hurricane Season "After Action Report" Lessons Learned Regarding Improved County and Municipal Hurricane Emergency Procedures (Volusia County, FL), June 2005.

- **9/11/2001 Attacks**
  - No authoritative assessment data found for this area

- **San Francisco Earthquake, 1989**
  - Not applicable due to nature of incident and lack of warning

Early Warning

- **Camille** R
  - Although the warnings for Camille evacuation were judged largely successful by local officials, confusion existed between the public and forecasters. Confusion surrounded the predicted landfall area of Camille until as late as Sunday night, only 4-6 hours prior to landfall. Many people had retired for the night Sunday, convinced that the storm would veer north into the Florida panhandle, or at least into Alabama as predicted (Wilkinson and Ross 1970, p. 24). Most people relied primarily on radio and television, then on communication with relatives as an information source.
  - Yet, the location along the coast greatly influenced what information was received, as broadcasts varied, depending upon their source. Pass Christian residents generally received information from New Orleans television rather than from Biloxi, which was watched by many residents to the east. The messages coming from different sources led to dire consequences and likely resulted in many misinformed residents remaining in their homes when they should have evacuated. The New Orleans listeners (in Pass Christian and Long Beach) did not receive the detailed, localized interpretations of the warnings provided by the local officials at Biloxi (Wilkinson and Ross 1970). Wilkinson and Ross (1970) provides an example where a "highly emotional plea to get out" was being issued over Biloxi television Sunday, as a newscaster in New Orleans was reported to have read only the general forecast and then returned to broadcasting music. Another example from Wilkinson and Ross (1970) tells of an out-of-town radio station re-running earlier bulletins, even after new ones had been broadcast over another station. Weather bulletins said accurately that the hurricane would strike land "near Gulfport," but the urgency to low-lying areas was conveyed only in messages from local newscasters.
  - Source: Thirty Years After Hurricane Camille: Lessons Learned, Lessons Lost by Pielke, Jr., Simonpietri, and Oxelson, 12 July 1999
- **Hugo** G
  - South Carolina ordered evacuation several days in advance. (GAO Report, 1991)
- **Andrew** G
  - Early warning and public notification process before the storm worked well. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
- **Charley / Frances / Ivan / Jeanne 2004** G
  - Early warning and public notification process provided by the national weather service worked well
- **9/11/2001 Attacks**
  - Not applicable due to nature of incident
- **San Francisco Earthquake, 1989**
  - Not applicable due to nature of incident

Authorities

- **Camille**
  - No assessment data found for this area.
- **Hugo**
  - No assessment data found for this area.
- **Andrew** (Y)
  - The issue of availability of active military forces also points out the need to make the reserves more readily available for disaster relief operations. However, for this to happen, legislative changes will be required because under the current federal law, reserve component forces can be activated by the federal government to perform disaster assistance efforts only in very limited circumstances. (GAO/NSIAD-93-180, 1993)
  - "The Governor and the Florida Legislature should request that Congress amend the Robert T. Stafford Disaster and Emergency Assistance Act to require the Federal Emergency Management Agency's representatives to serve more proactively following disasters as advisors to state and local emergency responders and to simplify processes for requesting federal assistance." (Recommendation #76, FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - "The Governor and the Florida Legislature should request that Congress amend the Robert T. Stafford Disaster and Emergency Assistance Act to provide for the predeployment or immediate activation of the military in response to a catastrophic disaster. (Recommendation #77, FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - Confusion existed among other federal agencies as to what authority was necessary for tasking, and the means to gain the correct authority. (JULLS #91732-40032, JTF ANDREW J-3 AAR)
  - Early warning and public notification process before the storm worked well. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993
- **Charley / Frances / Ivan / Jeanne 2004**
  - No assessment data found for this area.
- **9/11/2001 Attacks** (R)
  - "The US government did not find a way of pooling intelligence.... limited capacity to share information both internally and externally, insufficient training, perceived legal barriers to sharing information, and inadequate resources."
  - "Yet the Terrorist Threat Integration Center, while it has primary responsibility for terrorism analysis, is formally proscribed from having any oversight or operational authority and is not part of any operational entity, other than reporting to the director of central intelligence."
  - Source: "9/11 Commission Report", August 2004
- **San Francisco Earthquake, 1989**
  - No authoritative data has been identified that documents lessons associated with this area

Decision Processes

- **Camille (Insufficient Data)**
  - With Camille, the preparations for the event and the response were based on processes put in place long before the storm made landfall. Coordination between government agencies as well as with state and local officials was enhanced because of preexisting plans. Experience with other storms, such as Andrew in 1992, shows that coordination is an ongoing challenge. Attention to the health of hurricane decision process can help to ensure that when an event does occur, preparations result in effective decisions.
  - Source: Thirty Years After Hurricane Camille: Lessons Learned, Lessons Lost by Pielke, Jr., Simonpietri, and Oxelson, 12 July 1999

- **Hugo** R
  - One of the major problems with state and local responses to Hurricane Hugo was inadequate attention by state and local elected officials to disaster preparedness. (GAO Report 1991)
  - "Federal law, FEMA regulations, and FEMA policy limited the agency's ability to anticipate disasters for which there was adequate warning. Although FEMA officials were in place 24 hours prior to landfall of both Hurricanes Hugo and Andrew, resources took much longer to deploy. Sufficient quantities of food and clothing did not arrive in Charleston until six days after Hugo's landfall". (GAO Report, 1993)

- **Andrew**
  - No assessment data found for this area.

- **Charley / Frances / Ivan / Jeanne 2004**
  - No assessment data found for this area.

- **9/11/2001 Attacks** R
  - "It is possible that NORAD commanders would have ordered a shootdown in the absence of the authorization communicated by the Vice President, but given the gravity of the decision to shootdown a commercial airliner, and NORAD's caution that a mistake not be made, we view this possibility as unlikely."
  - "Too many agencies now have an opportunity to say no to change. The National Intelligence Director should participate in an NSC executive committee that can resolve differences in priorities among the agencies and bring the major disputes to the president for decision."
  - Source: "9/11 Commission Report", August 2004

- **San Francisco Earthquake, 1989**
  - No authoritative data has been identified that documents lessons associated with this area.

Communications

- **Camille** R
  - At the Weather Observatory at Boothville, Louisiana, just north of Venice, five weathermen were prepared to ride out the storm and make detailed observations. The observatory was designed to withstand hurricane conditions, and the structure had been built on prestressed concrete pilings with the main floor 12 feet above ground. Emergency power was operating, and radio contact was maintained with the Hurricane Forecast Center in New Orleans. At about 6:40 p.m., a pressure of 959.7 mb was recorded. About the same time, the wind-speed equipment became inoperative after having indicated wind gusts to 107 mph. Soon after, one meteorologist noticed that the water was rising rapidly and had reached the catwalk just below the floor of the observatory. Shortly after, the water rushed into the building. The emergency generator room was flooded, and the weathermen lost all contact with the outside world. They sought refuge in the electronics shop, and the water continued to rise until it was chest-deep on some observers. They lost all track of time, and it was several hours before the water began to recede (Rohlfs 1969).
  - The Department of Agriculture responded immediately to the growing pest problem which developed following the hurricane. The Plant Pest Control Division (PPC) was called upon to mitigate growing numbers of mosquitoes and flies, but the lack of phone lines obstructed communication between outside agencies and the PPC. The home telephone of the PPC administrator provided a key link between Gulfport and the outside world.
  - Source: Thirty Years After Hurricane Camille: Lessons Learned, Lessons Lost by Pielke, Jr., Simonpietri, and Oxelson, 12 July 1999.

- **Hugo** R
  - Response agencies' abilities to coordinate activities were hampered by communications problems:
    - South Carolina: Coordination activities were also hindered by communications systems that became defective or inoperable after the hurricane. Damage to electrical and telephone systems in South Carolina impeded communication between agencies and hampered the ability of state and local personnel to respond effectively to the disaster. (GAO Report, 1991)
    - Virgin Islands: Agency officials at all levels had difficulty in communicating with each other immediately after the storm until FEMA augmented its communication capabilities with emergency communications equipment from DOD and the Forest Service. (GAO Report, 1991)

Communications (cont'd)

- **Andrew** (R)
  - "The Florida Legislature should provide funding to ensure that each county emergency management agency in Florida is linked to the National Warning System." (Recommendation #5, FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - "The 1993 Legislature should appropriate sufficient funds to provide high frequency radios within each county's designated 24-hour warning point to serve as a back-up to the National Warning System. "(Recommendation #7, FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - A variety of communications resources were made available in the disaster area from federal, state, local and private entities. Problems resulted from the lack of common channel and frequencies. Every effort should be made to ensure that additional communications equipment deployed within the affected area(s) is compatible with other equipment. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)

- **Charley / Frances / Ivan / Jeanne 2004** (R)
  - Communications between field teams, Special Needs Shelters and local emergency operation centers were poor to non-existent in some counties (satellite phones and 800 MHz radio phones were used on a limited basis). (Florida Department of Health, Office of Inspector General, 2004 Hurricane Season After Action Report, March 2005)

- **9/11/2001 Attacks** (R)
  - "The emergency response effort escalated with the crash of United 175 into the South Tower. With that escalation, communications as well as command and control became increasingly critical and increasingly difficult."
  - "...the Pentagon response encountered difficulties that echo those experienced in New York... there were significant problems with both self-dispatching and communications... Almost all aspects of communications continued to be problematic, from initial notification to tactical operations."
  - Source: "9/11 Commission Report", August 2004

- **San Francisco Earthquake, 1989** (R)
  - Following the earthquake, phone systems were either damaged or overloaded. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - Radio traffic also increased dramatically... This traffic soon overwhelmed burdened dispatchers. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - Both Fire and Police departments reported problems with using the Computer Assisted Dispatch system effectively. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - The Equipment Division could not communicate with the Fire Department because of incompatible radio frequencies and lack of phones. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)

Situational Awareness

- **Camille** (R)
  - Refer to the previous comments under Early Warning and Communications
- **Hugo**
  - No assessment data found for this area.
- **Andrew** (R)
  - Post-disaster response and recovery suffered from several problems, including lack of full awareness of supply inventories and agency capabilities. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - Use of technical capabilities like satellite imagery was not maximized. Also, other military assets like Special Forces disaster assessment teams, that have the capability to assess damaged areas immediately after a disaster, were not used in the assessment process. (JULLS #91644-85171, CALL)
- **Charley / Frances / Ivan / Jeanne, 2004** (Y)
  - Logistics teams struggled with the Tracker system used to request disaster assistance and track responses. Tracker was the funnel through which all mission requests were registered, but fraught with duplicative entries, and confusing status updates.
  - The coordination of the need and resources was problematic throughout the response to Ivan. Contributing factors included the shear level of devastation to the transportation infrastructure, inoperable communication systems and the inability of the Tracker database to generate useful reports. (Hurricane Ivan Annex)
  - Problems with accountability and control of stockpiles at logistics staging areas.
  - Source: Florida Department of Health, Office of Inspector General, 2004 Hurricane Season After Action Report, March 2005.
- **9/11/2001 Attacks**
  - No authoritative assessment data found for this area
- **San Francisco Earthquake, 1989** (Y)
  - It was impossible for the Fire Department dispatch center to form a clear picture of resources assigned or those still available. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - Initial damage reports came from the public through the 911 system. Unfortunately, a significant number of citizen reports were inaccurate. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - The San Francisco Director for Public Works noted the need for a good situation board. He also noted that the Fire Department has a great situation board and that each [city] department has its own board, but there was no way for anyone to see what the overall situation really was. (San Francisco Departmental Debriefing Following the October 17, 1989 Earthquake Held November 1, 1989)

Civil Order

- **Camille**
  - No assessment data found for this area.

- **Hugo** (Y)
  - After Hurricane Hugo, widespread looting occurred on St. Croix. Because of confusion over leadership, roles, and priorities within the National Guard, law enforcement was poor or nonexistent. The territorial government requested U.S. military personnel to restore law and order. Poor coordination and communications also contributed to the breakdown of law and order on St. Croix. (GAO Report 1991)

- **Andrew** (Y)
  - A number of disaster victims told us that the relief effort was inadequate. They said that they survived by resorting to such actions as looting grocery stores to feed their families, drinking potentially contaminated water from leaking faucets, and staving off looters by living in makeshift dwellings set up in front of their homes. GAO report, 1993 (DISASTER MANAGEMENT: Recent Disasters Demonstrate the Need to Improve the Nation's Response Strategy)
  - Gov Chiles did not initially request federal troops, because he thought the National Guard would be sufficient to control looting (OMB/OFPP FEMA Best Practices, Aug 2005)
  - FEMA should amend the Federal Response Plan to establish a security ESF. (Recommendation #78, (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)

- **Charley / Frances / Ivan / Jeanne 2004**
  - No assessment data found for this area.

- **9/11/2001 Attacks**
  - No authoritative assessment data found for this area

- **San Francisco Earthquake, 1989** (G)
  - Within Oakland, there were no confirmed reports of looting during the response. The only criminal act related to the earthquake was trespassing when some homeless people entered damaged buildings looking for a place to sleep. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - Police resources could have dealt successfully with twice the affected area and one additional major perimeter if other conditions (e.g., no major aftershocks, lack of looting. few reported offenses) remained the same. (San Francisco Police Department City And County Of San Francisco October 17, 1989 Earthquake Report)

Training

- **Camille**
  - No assessment data found for this area.
- **Hugo** (R)
  - Most of FEMA'S staff are not trained and do not have skills in responding to natural disasters because they do not work on disaster assistance programs and are not trained . Shortages in trained staff were highlighted during the Hurricane Hugo and the Loma Prieta experiences. (GAO Report, 1991)
  - One of the major problems with state and local responses to Hurricane Hugo was inadequate attention by state and local elected officials to disaster preparedness. (GAO Report, 1991)
- **Andrew** (R)
  - The federal government does not provide funds for state programs and exercises involving the Florida National Guard. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - "The 1993 Legislature should provide funding to the Florida National Guard for planning, training, participating in exercises, predeploying prior to issuance of an executive order and responding immediately to emergencies." (Recommendation #73, FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
- **Charley / Frances / Ivan / Jeanne 2004** (Y)
  - The Incident Management Teams in Florida were not sufficiently trained in the use of the Incident Command System (ICS) and no ICS-based exercises had occurred (Hurricane Ivan Annex)
  - Logistics teams had no training with the Tracker system used to request disaster assistance
  - Source: Florida Department of Health, Office of Inspector General, 2004 Hurricane Season After Action Report, March 2005.
- **9/11/2001 Attacks**
  - No authoritative assessment data found for this area
- **San Francisco Earthquake, 1989** (Y)
  - Not all [city] employees designated to play an important role during an emergency had been adequately trained. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - The Loma Prieta event taught us that the City needs more training and drilling on EOC [Emergency Operations Center],procedures; few departments were prepared to fulfill their assigned role when they arrived at the EOC. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - Exercises and orientation sessions based on the San Francisco Fire Department Disaster Operations Plan should be part of an on-going training program. (Report on the Operations of the San Francisco Fire Department following the Earthquake and Fire of October 17, 1989)
  - Written policies do not substitute for exercises and persons who took part in the last exercise at the Emergency Command Center in 1988 were not the top members of the departments. (San Francisco Departmental Debriefing Following the October 17, 1989 Earthquake Held November 1, 1989)

Search and Rescue Ops

- **Camille**
  - No assessment data found for this area.
- **Hugo**
  - No assessment data found for this area.
- **Andrew** (Y)
  - The Department of Community Affairs, in conjunction with appropriate state and federal agencies, should assist local jurisdictions in the development of urban search and rescue teams and create a statewide urban search and rescue program. (Recommendation #61, FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
    - Many local government personnel resources are not trained in large-scale urban search and rescue operations
    - State teams could be established to bring search, extrication, medical and other essential skills that otherwise might not be available to the community
- **Charley / Frances / Ivan / Jeanne 2004**
  - No assessment data found for this area.
- **9/11/2001 Attacks**
  - No authoritative assessment data found for this area
- **San Francisco Earthquake, 1989** (Y)
  - There was an insufficient amount of Heavy Rescue and Urban Search and rescue equipment. (Report on the Operations of the San Francisco Fire Department following the Earthquake and Fire of October 17, 1989)
  - The response to the Cypress I-880 freeway collapse was the major challenge to emergency response personnel. The Fire Department responded to only one other structure rescue. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)

Command and Control

- **Camille**
  - No assessment data found for this area.
- **Hugo** (R)
  - "A frustration expressed by evacuees during Hugo was the lack of communication between officials and the public. There were many complaints that authorities were not passing along any information." Congressional testimony, 2005
  - One of the major problems with state and local responses to Hurricane Hugo was inadequate attention by state and local elected officials to disaster preparedness. (GAO Report, 1991)
- **Andrew** (Y)
  - The use of cellular phones created a number of problems after Hurricane Andrew. Many cell sites were damaged or destroyed. Many of those remaining failed from the lack of commercial power to the cell site batteries immediately after landfall. Although pre-existing service capacity in the impacted area was restored with four days, the channels became so jammed with calls that the system could not be used as anticipated. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - A senior FEMA representative was not provided to the division and local government until the fourth week after the hurricane, thereby hindering the decision-making process. (JULLS #00147-79594, FORSCOM FCJ3-OC)
  - Unclear assignment of responsibility for centralized management of damage assessment (JULLS #92556-15571, JTF ANDREW)
  - Confusion existed among other federal agencies as to what authority was necessary for tasking, and the means to gain the correct authority. (JULLS #91732-40032, JTF ANDREW J-3 AAR)
- **Charley / Frances / Ivan / Jeanne 2004** (Y)
  - "Overhead teams" were deployed to forward areas to augment leadership when communications were degraded. The OTs created some confusion in effected counties.
  - The role of the Emergency Coordination Officer versus the Incident Commander must be reviewed and clarified
  - The emergency management relationship of the Deputy Secretaries and the Division Directors with the Incident Commander and the Incident Management requires clarification and formalized in policy
  - Source: Florida Department of Health, Office of Inspector General, 2004 Hurricane Season After Action Report, March 2005.
  - Lack of clear and timely guidance from local to state law enforcement resulted in confusion and lack of clearly defined expectations. (Mississippi Emergency Management Agency, Hurricane Ivan After Action Report, December 2004)
  - EM 2000 (message handling system) was not utilized properly during the response to Hurricane Ivan
  - Poor coordination between the State Emergency Response team and the State Emergency Operations Center
  - Source: Mississippi Emergency Management Agency, Hurricane Ivan After Action Report, December 2004.

Command and Control (cont'd)

- **9/11/2001 Attacks** (R)
  - "For a unified incident management system to succeed, each participant must have command and control of its own units and adequate internal communications. This was not always the case at the WTC on 9/11."
  - "…none of the information conveyed in the White House video teleconference, at least in the first hour, was being passed to the NMCC."
  - "We found no evidence that, at this critical time, NORAD's top commanders, in Florida or Cheyenne Mountain, coordinated with their counterparts at FAA headquarters to improve awareness and organize a common response."
  - "The emergency response effort escalated with the crash of United 175 into the South Tower. With that escalation, communications as well as command and control became increasingly critical and increasingly difficult."
  - Source: "9/11 Commission Report", August 2004

- **San Francisco Earthquake, 1989** (Y)
  - The San Francisco Emergency Command Center was forced to close down earlier than it should have because poor ventilation, space limitations, inadequate supplies, and other facility shortcomings made it very difficult to conduct business from that site. (San Francisco Departmental Debriefing Following the October 17, 1989 Earthquake Held November 1, 1989)
  - Inadequate facilities for the Emergency Operations Center located within the Central Fire Alarm Station building caused non-Fire Department personnel to use emergency phone lines on dispatch consoles, including 9-1-1 lines, which further limited and delayed Fire Department response to some calls. (Report on the Operations of the San Francisco Fire Department following the Earthquake and Fire of October 17, 1989)
  - A consistent observation was that lines of authority were unclear. (San Francisco Police Department City And County Of San Francisco October 17, 1989 Earthquake Report)
  - The EOC [Emergency Operations Center] was activated by the Emergency Services manager within 15 minutes following the earthquake. During this early response period, EOC support staff was not available… Within the first 45 minutes following the earthquake, the Assistant City Manager, the Public Information Officer, and an OES [Office of Emergency Services] Emergency Planning Coordinator arrived to support the EOC. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)

Mass Care

- **Camille (Insufficient Data)**
  - The following references to mass care are noted; however, it is insufficient to make an assessment
  - Throughout the day immediately following the storm, many agencies and volunteer groups aided the thousands of residents whose homes were destroyed or severely damaged. Thousands of displaced persons were provided shelter, food, clothing, and medicine by various federal, state, and local agencies and by donations through relief organizations (USACE 1970, p. 32). These actions are summarized in Table 4.
  - The Community Relations Service (CRS), a division of the Department of Justice, acted as a vital link between the survivors and the available resources arriving in the affected area. CRS placed 400 emergency telephone calls between survivors and concerned family members throughout the rest of the country and world. Employees of CRS acquired, stored, and distributed 30-50 tons of bedding that survived the storm in the Hotel Biloxi (OEP 1969, p. 20). CRS also arranged for storage and distribution of 40,000 textbooks donated by New York School Districts (OEP 1969, p. 21). In addition, the Federal Bureau of Investigation assisted the coroner in the processing of 30 unidentified victims.
  - The American Red Cross played a key role in providing some semblance of comfort and accommodations to the displaced people. Shelters for 85,000 people were established prior to the storm. Relief centers manned by volunteers were accessible after the storm to provide financial assistance and services such as food stamp disbursement to the victims. In total, 913 volunteers and 805 professional staff members were assigned to the affected area (OEP 1969, p. 79). Red Cross personnel questioned the survivors for an inventory of deaths, damages, and to determine what assistance was necessary. The cumulative Red Cross relief operation totaled almost 15 million US $ (1969 dollars) (OEP 1969, p. 82).
  - Source: Thirty Years After Hurrican Camille: Lessons Learned, Lessons Lost by Pielke, Jr., Simonpietri, and Oxelson, 12 July 1999

- **Hugo** (R)
  - "Sufficient quantities of food and clothing did not arrive in Charleston until six days after Hugo's landfall". (FEMA Daniels Report, 2000)
  - South Carolina study recommended the creation of a federal rapid response team that would provide immediate aid to victims of disasters before the arrival of other federal entities and national voluntary relief agencies. (GAO Report, 1993)

- **Andrew** (Y)
  - Numerous shortfalls were noted and recommendations made with respect to the number, location, equipping, etc. of shelters for evacuees. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - An additional recommendation was made to strongly promote in-place sheltering to avoid tragic loss of life from a hurricane catching motorists on highways while trying to evacuate. Intent of associated recommendations is to reduce shelter demand. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)

Mass Care (cont'd)

- **Charley / Frances / Ivan / Jeanne 2004** (R)

- **9/11/2001 Attacks**
  - No authoritative assessment data found for this area

- **San Francisco Earthquake, 1989** (Y)
  - The shelter system in place at the time of the earthquake was based primarily on experience with floods. During floods, shelter populations usually peak in the first 48 hours and then begin to disperse as the waters recede. Earthquakes, through aftershocks, continue to pose a hazard for days and potentially weeks after the initial event. Consequently, shelters tend to remain open for an extended period of time. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - Although the Red Cross had 4,000 volunteers, they did not have enough personnel trained in shelter management to meet the needs of a significant earthquake. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - The lengthy time that shelters were opened led to a shortage of adequate medical staff. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)

Camille

- **Federal Plans**
  - No specific data on a Federal Plan but referenced in the following bullets.
  - For all of these reasons, societal responses to hurricanes made in the face of an approaching storm and in its immediate aftermath are most effective when they are based upon decision processes developed over the long term.
  - With Camille, the preparations for the event and the response were based on processes put in place long before the storm made landfall. Coordination between government agencies as well as with state and local officials was enhanced because of preexisting plans.
  - Source: Thirty Years After Hurricane Camille: Lessons Learned, Lessons Lost by Pielke, Jr., Simonpietri, and Oxelson, 12 July 1999

- **State/Local Plans**
  - With Camille, the preparations for the event and the response were based on processes put in place long before the storm made landfall. Coordination between government agencies as well as with state and local officials was enhanced because of preexisting plans. (Thirty Years After Hurricane Camille: Lessons Learned, Lessons Lost by Pielke, Jr., Simonpietri, and Oxelson, 12 July 1999)

- **Evacuation Operations** (Y)
  - The wide range of possible landfall locations greatly complicated preparation efforts. By official estimates, 81,000 out of 150,000 people in the evacuation area were moved to safety. In the early hours of Sunday morning, 18 hours before landfall, some residents began boarding up homes and businesses, and a trickle of vehicles moved north. (ESSA, 1969a). As the threat to the low-lying coastline became evident, the trickle of evacuees became a flood. People hastily loaded what few belongings they could carry and fled.
  - In the hours immediately prior to landfall, evacuation was impossible due to a number of of low-lying (eventually swamped) bridges. Local officials appeared on radio and television stations to point out the danger and to plead with people reluctant to abandon their homes (ESSA, 1969a). Police and Civil Defense officials went through the areas of special hazard to individually contact them. The need to remove everyone from the tidal beaches was urgent and, in at least one case, arrests were made in a desperate move to save lives (ESSA, 1969a).
  - Camille occurred when there were many fewer people in vulnerable coastal locations. Consider that only 150,000 people were ordered to evacuate during Camille's approach, this compares with more than 750,000 ordered to evacuate when Andrew approached south Florida in 1992.
  - Source: Thirty Years After Hurricane Camille: Lessons Learned, Lessons Lost by Pielke, Jr., Simonpietri, and Oxelson, 12 July 1999

Camille

- **Early Warning** (R)
  - Although the warnings for Camille evacuation were judged largely successful by local officials, confusion existed between the public and forecasters. Confusion surrounded the predicted landfall area of Camille until as late as Sunday night, only 4-6 hours prior to landfall. Many people had retired for the night Sunday, convinced that the storm would veer north into the Florida panhandle, or at least into Alabama as predicted (Wilkinson and Ross 1970, p. 24). Most people relied primarily on radio and television, then on communication with relatives as an information source.
  - Yet, the location along the coast greatly influenced what information was received, as broadcasts varied, depending upon their source. Pass Christian residents generally received information from New Orleans television rather than from Biloxi, which was watched by many residents to the east. The messages coming from different sources led to dire consequences and likely resulted in many misinformed residents remaining in their homes when they should have evacuated. The New Orleans listeners (in Pass Christian and Long Beach) did not receive the detailed, localized interpretations of the warnings provided by the local officials at Biloxi (Wilkinson and Ross 1970). Wilkinson and Ross (1970) provides an example where a "highly emotional plea to get out" was being issued over Biloxi television Sunday, as a newscaster in New Orleans was reported to have read only the general forecast and then returned to broadcasting music. Another example from Wilkinson and Ross (1970) tells of an out-of-town radio station re-running earlier bulletins, even after new ones had been broadcast over another station. Weather bulletins said accurately that the hurricane would strike land "near Gulfport," but the urgency to low-lying areas was conveyed only in messages from local newscasters.
  - Source: Thirty Years After Hurricane Camille: Lessons Learned, Lessons Lost by Pielke, Jr., Simonpietri, and Oxelson, 12 July 1999

- **Authorities**
  - No assessment data found for this area.

Camille

- **Decision Processes**
  - No assessment data found for this area.
- **Communications** R
  - At the Weather Observatory at Boothville, Louisiana, just north of Venice, five weathermen were prepared to ride out the storm and make detailed observations. The observatory was designed to withstand hurricane conditions, and the structure had been built on prestressed concrete pilings with the main floor 12 feet above ground. Emergency power was operating, and radio contact was maintained with the Hurricane Forecast Center in New Orleans. At about 6:40 p.m., a pressure of 959.7 mb was recorded. About the same time, the wind-speed equipment became inoperative after having indicated wind gusts to 107 mph. Soon after, one meteorologist noticed that the water was rising rapidly and had reached the catwalk just below the floor of the observatory. Shortly after, the water rushed into the building. The emergency generator room was flooded, and the weathermen lost all contact with the outside world. They sought refuge in the electronics shop, and the water continued to rise until it was chest-deep on some observers. They lost all track of time, and it was several hours before the water began to recede (Rohlfs 1969)
  - The Department of Agriculture responded immediately to the growing pest problem which developed following the hurricane. The Plant Pest Control Division (PPC) was called upon to mitigate growing numbers of mosquitoes and flies, but the lack of phone lines obstructed communication between outside agencies and the PPC. The home telephone of the PPC administrator provided a key link between Gulfport and the outside world.
  - Source: Thirty Years After Hurricane Camille: Lessons Learned, Lessons Lost by Pielke, Jr., Simonpietri, and Oxelson, 12 July 1999
- **Situational Awareness** R
  - Refer to the previous comments under Early Warning and Communications
- **Civil Order**
  - No assessment data found for this area
- **Training**
  - No assessment data found for this area

Camille

- **Search & Rescue Ops**
  - No assessment data found for this area
- **Command & Control**
  - No assessment data found for this area
- **Mass Care**
  - The following references to mass care are noted; however, it is insufficient to make an assessment
  - Throughout the day immediately following the storm, many agencies and volunteer groups aided the thousands of residents whose homes were destroyed or severely damaged. Thousands of displaced persons were provided shelter, food, clothing, and medicine by various federal, state, and local agencies and by donations through relief organizations (USACE 1970, p. 32). These actions are summarized in Table 4.
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  - The American Red Cross played a key role in providing some semblance of comfort and accommodations to the displaced people. Shelters for 85,000 people were established prior to the storm. Relief centers manned by volunteers were accessible after the storm to provide financial assistance and services such as food stamp disbursement to the victims. In total, 913 volunteers and 805 professional staff members were assigned to the affected area (OEP 1969, p. 79). Red Cross personnel questioned the survivors for an inventory of deaths, damages, and to determine what assistance was necessary. The cumulative Red Cross relief operation totaled almost 15 million US $ (1969 dollars) (OEP 1969, p. 82).
  - Source: Thirty Years After Hurricane Camille: Lessons Learned, Lessons Lost by Pielke, Jr., Simonpietri, and Oxelson, 12 July 1999

San Francisco Earthquake (Loma Prieta)

- **Federal Plans**
  - No authoritative data has been identified that documents lessons associated with federal plans
- **State/Local Plans** (Y)
  - City's operational concept did not include the Incident Command System for the Emergency Operations Center although it was used by both Police and Fire (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - The system in place to provide resources to the local jurisdiction seemed cumbersome and ineffective. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - More formalized and detailed damage assessment procedures are being developed for use by the police department in the future. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - No one in the City foresaw the need to relocate 12 departments... nor did anyone realize what a massive process it would be to apply for and receive aid. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - Plans which called for helicopter transportation from Marin County did not work. (Report on the Operations of the San Francisco Fire Department following the Earthquake and Fire of October 17, 1989)
  - Plans for use of the commercial telephone system for personnel recall should be examined. (Report on the Operations of the San Francisco Fire Department following the Earthquake and Fire of October 17, 1989)
  - Plans should be developed to provide disaster supplies to all Fire department facilities for the support of personnel during long-term emergencies. (Report on the Operations of the San Francisco Fire Department following the Earthquake and Fire of October 17, 1989)
- **Evacuation Ops**
  - Not applicable due to nature of incident and lack of warning
- **Early Warning**
  - Not applicable due to nature of incident
- **Authorities**
  - No authoritative data has been identified that documents lessons associated with this area
- **Decision Processes**
  - No authoritative data has been identified that documents lessons associated with this area

San Francisco Earthquake (Loma Prieta)

- **Communications** (R)
  - Following the earthquake, phone systems were either damaged or overloaded. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - Radio traffic also increased dramatically… This traffic soon overwhelmed burdened dispatchers. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - Both Fire and Police departments reported problems with using the Computer Assisted Dispatch system effectively. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - The Equipment Division could not communicate with the Fire Department because of incopatible radio frequencies and lack of phones. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)

- **Situational Awareness** (Y)
  - It was impossible for the Fire Department dispatch center to form a clear picture of resources assigned or those still available. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - Initial damage reports came from the public through the 911 system. Unfortunately, a significant number of citizen reports were inaccurate. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - The San Francisco Director for Public Works noted the need for a good situation board. He noted that the Fire Department has a great situation board and that each [city] department has its own board, but there was no way for anyone to see what the overall situation really was. (San Francisco Departmental Debriefing Following the October 17, 1989 Earthquake Held November 1, 1989)

- **Civil Order** (G)
  - Within Oakland, there were no confirmed reports of looting during the response. The only criminal act related to the earthquake was trespassing when some homeless people entered damaged buildings looking for a place to sleep. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - Police resources could have dealt successfully with twice the affected area and one additional major perimeter if other conditions (e.g., no major aftershocks, lack of looting. few reported offenses) remained the same. (San Francisco Police Department City And County Of San Francisco October 17, 1989 Earthquake Report)

San Francisco Earthquake (Loma Prieta)

- **Training** (Y)
  - Not all [city] employees designated to play an important role during an emergency had been adequately trained. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - The Loma Prieta event taught us that the City needs more training and drilling on EOC [Emergency Operations Center],procedures; few departments were prepared to fulfill their assigned role when they arrived at the EOC. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - Exercises and orientation sessions based on the San Francisco Fire Department Disaster Operations Plan should be part of an on-going training program. (Report on the Operations of the San Francisco Fire Department following the Earthquake and Fire of October 17, 1989)
  - Written policies do not substitute for exercises and persons who took part in the last exercise at the Emergency Command Center in 1988 were not the top members of the departments. (San Francisco Departmental Debriefing Following the October 17, 1989 Earthquake Held November 1, 1989)

- **Search & Rescue Ops** (Y)
  - There was an insufficient amount of Heavy Rescue and Urban Search and rescue equipment. (Report on the Operations of the San Francisco Fire Department following the Earthquake and Fire of October 17, 1989)
  - The response to the Cypress I-880 freeway collapse was the major challenge to emergency response personnel. The Fire Department responded to only one other structure rescue. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)

San Francisco Earthquake (Loma Prieta)

- **Command & Control** (Y)
  - The San Francisco Emergency Command Center was forced to close down earlier than it should have because poor ventilation, space limitations, inadequate supplies, and other facility shortcomings made it very difficult to conduct business from that site. (San Francisco Departmental Debriefing Following the October 17, 1989 Earthquake Held November 1, 1989)
  - Inadequate facilities for the Emergency Operations Center located within the Central Fire Alarm Station building caused non-Fire Department personnel to use emergency phone lines on dispatch consoles, including 9-1-1 lines, which further limited and delayed Fire Department response to some calls. (Report on the Operations of the San Francisco Fire Department following the Earthquake and Fire of October 17, 1989)
  - A consistent observation was that lines of authority were unclear. (San Francisco Police Department City And County Of San Francisco October 17, 1989 Earthquake Report)
  - The EOC [Emergency Operations Center] was activated by the Emergency Services manager within 15 minutes following the earthquake. During this early response period, EOC support staff was not available… Within the first 45 minutes following the earthquake, the Assistant City Manager, the Public Information Officer, and an OES [Office of Emergency Services] Emergency Planning Coordinator arrived to support the EOC. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)

- **Mass Care** (Y)
  - The shelter system in place at the time of the earthquake was based primarily on experience with floods. During floods, shelter populations usually peak in the first 48 hours and then begin to disperse as the waters recede. Earthquakes, through aftershocks, continue to pose a hazard for days and potentially weeks after the initial event. Consequently, shelters tend to remain open for an extended period of time. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - Although the Red Cross had 4,000 volunteers, they did not have enough personnel trained in shelter management to meet the needs of a significant earthquake. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)
  - The lengthy time that shelters were opened led to a shortage of adequate medical staff. (City of Oakland Loma Prieta Earthquake After Action Report, October 1990)

Hugo

- **Federal Plans** (R)
  - Dissatisfaction with federal response to Hugo, led by FEMA, led to the drafting of the Federal Response Plan. (GAO Report, 1993)
  - "Federal law, FEMA regulations, and FEMA policy limited the agency's ability to anticipate disasters for which there was adequate warning. Although FEMA officials were in place 24 hours prior to landfall of both Hurricanes Hugo and Andrew, resources took much longer to deploy. Sufficient quantities of food and clothing did not arrive in Charleston until six days after Hugo's landfall". (GAO Report, 1993)
  - "The agency (FEMA) proved entirely unprepared for catastrophic disasters like Hurricanes Hugo and Andrew and the Loma Prieta Earthquake, which shattered state and local capabilities.". (FEMA Daniels Report, 2000)

Hugo

- **State/Local Plans** (Y)
  - Hurricane Hugo exposed "the need to provide state and local governments with training specifically geared towards developing such necessary skills for responding to catastrophic disasters as assessing damage and estimating the amount of mass care needs." (GAO Report, 1993)
  - The lack of or inadequate standard operating procedures hampered State Standard Operating response and recovery operations in three states-California, South Procedures Hampered Carolina, and the Virgin Islands. Standard operating procedures are Response and Recovery detailed procedures for implementing tasks, such as managing an emergency operations center or reimbursing local governments for public assistance projects. In South Carolina, state officials managing the public assistance program had to develop standard operating procedures as they carried out these functions and, as a result, they spent valuable time developing procedures instead of providing assistance. Lack of or inadequate standard operating procedures for state emergency operations centers in California, South Carolina, and the Virgin Islands contributed to coordination difficulties, such as keeping track of assistance requests. (GAO Report, 1991)
  - Immediately after Hurricane Hugo struck, two Activities state emergency operations centers were opened in the capital. The operation of two separate emergency centers was contrary to the state operations plan, and a duplication of effort. According to a state emergency preparedness official, five county requests to the state for assistance were unfilled because of coordination problems between the two centers. (GAO Report, 1991)
  - Failure of South Carolina to perform lane reversals for freeways caused significant delays and traffic jams. South Carolina fixed this after Hurricane Floyd. (Congressional testimony to Senate committee on Commerce, Science, and Transportation, Subcommittee on Disaster Prevention and Prediction, 2005)
  - Virgin Islands had virtually no emergency planning capability – resulted in inability to act as first responder. (GAO Report, 1991)

Hugo

- **Evacuation Operations** (Y)
  - State and local governments and voluntary relief agencies that are responsible for immediately responding to disasters fulfilled their specific roles. For example, they evacuated citizens before the hurricane struck and provided emergency services, such as food and shelter. Federal agencies also participated in these activities by assisting states and local agencies. (GAO Report, 1991)
  - Failure of SC to perform lane reversals for freeways caused significant delays. SC fixed this after Hurricane Floyd. (Congressional testimony to Senate committee on Commerce, Science, and Transportation, Subcommittee on Disaster Prevention and Prediction, 2005)
  - Evacuation rate about 65% in coastal counties. (Quick Response Report #128 - SOUTH CAROLINA'S RESPONSE TO HURRICANE FLOYD, University of South Carolina, 2000)

- **Early Warning** (G)
  - South Carolina ordered evacuation several days in advance. (GAO Report, 1991)

- **Authorities**
  - No assessment data found for this area

- **Decision Processes** (R)
  - One of the major problems with state and local responses to Hurricane Hugo was inadequate attention by state and local elected officials to disaster preparedness. (GAO Report 1991)
  - "Federal law, FEMA regulations, and FEMA policy limited the agency's ability to anticipate disasters for which there was adequate warning. Although FEMA officials were in place 24 hours prior to landfall of both Hurricanes Hugo and Andrew, resources took much longer to deploy. Sufficient quantities of food and clothing did not arrive in Charleston until six days after Hugo's landfall". (GAO Report, 1993)

Hugo

- **Communications** R
  - Response agencies' abilities to coordinate activities were hampered by communications problems:
  - South Carolina: Coordination activities were also hindered by communications systems that became defective or inoperable after the hurricane. Damage to electrical and telephone systems in South Carolina impeded communication between agencies and hampered the ability of state and local personnel to respond effectively to the disaster. (GAO Report, 1991)
  - Virgin Islands: Agency officials at all levels had difficulty in communicating with each other immediately after the storm until FEMA augmented its communication capabilities with emergency communications equipment from DOD and the Forest Service. (GAO Report, 1991)

- **Situational Awareness**
  - No assessment data found for this area

- **Civil Order** Y
  - After Hurricane Hugo, widespread looting occurred on St. Croix. Because of confusion over leadership, roles, and priorities within the National Guard, law enforcement was poor or nonexistent. The territorial government requested U.S. military personnel to restore law and order. Poor coordination and communications also contributed to the breakdown of law and order on St. Croix. (GAO Report 1991)

- **Training** R
  - Most of FEMA'S staff are not trained and do not have skills in responding to natural disasters because they do not work on disaster assistance programs and are not trained . Shortages in trained staff were highlighted during the Hurricane Hugo and the Loma Prieta experiences. (GAO Report, 1991)
  - One of the major problems with state and local responses to Hurricane Hugo was inadequate attention by state and local elected officials to disaster preparedness. (GAO Report 1991)

Hugo

- **Search & Rescue Ops**
  - No assessment data found for this area
- **Command & Control** R
  - "A frustration expressed by evacuees during Hugo was the lack of communication between officials and the public. There were many complaints that authorities were not passing along any information." (Congressional testimony to Senate committee on Commerce, Science, and Transportation, Subcommittee on Disaster Prevention and Prediction, 2005)
  - One of the major problems with state and local responses to Hurricane Hugo was inadequate attention by state and local elected officials to disaster preparedness. (GAO Report 1991)
- **Mass Care** R
  - "Sufficient quantities of food and clothing did not arrive in Charleston until six days after Hugo's landfall". (FEMA Daniels Report, 2000)
  - South Carolina study recommended the creation of a federal rapid response team that would provide immediate aid to victims of disasters before the arrival of other federal entities and national voluntary relief agencies. (GAO Report, 1993)

Andrew

- **Federal Plans** (R)
  - Federal Response Plan (FRP) was not fully implemented (JULLS #91732-40032, JTF ANDREW)
  - Federal Response Plan did not have an Emergency Response Function for Security (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - Lack of Joint Disaster Relief Doctrine (JULLS #91623-75230, CALL)
  - Unclear assignment of responsibility for centralized management of damage assessment (JULLS #92556-15571, JTF ANDREW)
  - Greater military involvement required than envisioned in the FRP (JULLS #91766-03686, JTF ANDREW)
  - Hurricane Andrew was FEMA's first opportunity to test its Federal Response Plan… and the test raised questions about the plan's workability. (GAO/NSIAD-93-180, 1993)

- **State/Local Plans** (Y)
  - Strengthen plans for evacuation, shelter, and post-disaster response and recovery (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)

- **Evacuation Operations** (R)
  - Improve evacuation planning (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - Florida and its counties adopt plans tailored to minor, major, and catastrophic disasters. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)

Andrew

- **Early Warning** G
  - Early warning and public notification process before the storm worked well. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)

- **Authorities** Y
  - The issue of availability of active military forces also points out the need to make the reserves more readily available for disaster relief operations. However, for this to happen, legislative changes will be required because under the current federal law, reserve component forces can be activated by the federal government to perform disaster assistance efforts only in very limited circumstances. (GAO/NSIAD-93-180, 1993)
  - "The Governor and the Florida Legislature should request that Congress amend the Robert T. Stafford Disaster and Emergency Assistance Act to require the Federal Emergency Management Agency's representatives to serve more proactively following disasters as advisors to state and local emergency responders and to simplify processes for requesting federal assistance." (Recommendation #76, FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - "The Governor and the Florida Legislature should request that Congress amend the Robert T. Stafford Disaster and Emergency Assistance Act to provide for the predeployment or immediate activation of the military in response to a catastrophic disaster. (Recommendation #77, FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - Confusion existed among other federal agencies as to what authority was necessary for tasking, and the means to gain the correct authority. (JULLS #91732-40032, JTF ANDREW J-3 AAR)

Andrew

- **Decision Processes/Triggers**
  - No assessment data found for this area

- **Communications** R
  - "The Florida Legislature should provide funding to ensure that each county emergency management agency in Florida is linked to the National Warning System." (Recommendation #5, FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - "The 1993 Legislature should appropriate sufficient funds to provide high frequency radios within each county's designated 24-hour warning point to serve as a back-up to the National Warning System." (Recommendation #7, FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - A variety of communications resources were made available in the disaster area from federal, state, local and private entities. Problems resulted from the lack of common channel and frequencies. Every effort should be made to ensure that additional communications equipment deployed within the affected area(s) is compatible with other equipment. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)

- **Situational Awareness** R
  - Post-disaster response and recovery suffered from several problems, including lack of full awareness of supply inventories and agency capabilities. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - Use of technical capabilities like satellite imagery was not maximized. Also, other military assets like Special Forces disaster assessment teams, that have the capability to assess damaged areas immediately after a disaster, were not used in the assessment process. (JULLS #91644-85171, CALL)

Andrew

- **Civil Order** (Y)
  - A number of disaster victims told us that the relief effort was inadequate. They said that they survived by resorting to such actions as looting grocery stores to feed their families, drinking potentially contaminated water from leaking faucets, and staving off looters by living in makeshift dwellings set up in front of their homes. GAO Report, 1993 (DISASTER MANAGEMENT: Recent Disasters Demonstrate the Need to Improve the Nation's Response Strategy)
  - Gov Chiles did not initially request federal troops, because he thought the National Guard would be sufficient to control looting (OMB/OFPP FEMA Best Practices, Aug 2005)
  - FEMA should amend the Federal Response Plan to establish a security ESF. (Recommendation #78, (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)

- **Training** (R)
  - The federal government does not provide funds for state programs and exercises involving the Florida National Guard. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - "The 1993 Legislature should provide funding to the Florida National Guard for planning, training, participating in exercises, predeploying prior to issuance of an executive order and responding immediately to emergencies." (Recommendation #73, FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)

- **Search & Rescue** (Y)
  - The Department of Community Affairs, in conjunction with appropriate state and federal agencies, should assist local jurisdictions in the development of urban search and rescue teams and create a statewide urban search and rescue program. (Recommendation #61, FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
    - Many local government personnel resources are not trained in large-scale urban search and rescue operations
    - State teams could be established to bring search, extrication, medical and other essential skills that otherwise might not be available to the community

Andrew

- **Command & Control** (Y)
  - The use of cellular phones created a number of problems after Hurricane Andrew. Many cell sites were damaged or destroyed. Many of those remaining failed from the lack of commercial power to the cell site batteries immediately after landfall. Although pre-existing service capacity in the impacted area was restored with four days, the channels became so jammed with calls that the system could not be used as anticipated. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - A senior FEMA representative was not provided to the division and local government until the fourth week after the hurricane, thereby hindering the decision-making process. (JULLS #00147-79594, FORSCOM FCJ3-OC)
  - Unclear assignment of responsibility for centralized management of damage assessment. (JULLS #92556-15571, JTF ANDREW)
  - Confusion existed among other federal agencies as to what authority was necessary for tasking, and the means to gain the correct authority. (JULLS #91732-40032, JTF ANDREW J-3 AAR)
- **Mass Care** (Y)
  - Numerous shortfalls were noted and recommendations made with respect to the number, location, equipping, etc. of shelters for evacuees. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)
  - An additional recommendation was made to strongly promote in-place sheltering to avoid tragic loss of life from a hurricane catching motorists on highways while trying to evacuate. Intent of associated recommendations is to reduce shelter demand. (FL Governor's Disaster Planning and Response Review Committee report, Jan 1993)

Charley/Frances/Ivan/Jeanne

- **Federal Plans**
  - No assessment data found for this area
- **State/Local Plans** (Y)
  - The department [Florida DOH] was reasonably well prepared for a single incident; although, in retrospect, much more should have been accomplished prior to onset of the 2004 hurricane season
  - The state's [Florida] Comprehensive Emergency Management Plan served as a guide for disaster management and provided a foundation for a unified approach to the catastrophic events
  - The governor's [Florida] executive orders were timely and effective (3 days prior to landfall)
  - Special Needs Shelter plans not sufficiently validated
  - Source: Florida Department of Health, Office of Inspector General, 2004 Hurricane Season After Action Report, March 2005.
  - A number of municipalities indicated that they did not have emergency plans, that they were out-of-date, or that they had other inadequacies. In addressing the recommended actions proposed for this issue, **erp&m** would also note the federal requirement that all local governments have an emergency plan in place by October 1, 2006 that is compliant with the requirements of the National Incident Management System (NIMS) and is consistent with the National Response Plan (NRP).
  - For several jurisdictions and organizations, the 2004 hurricane season was a challenge to maintain operations in spite of post-impact conditions, and specifically the protracted loss of power and telephone communications. In some cases, a COOP-type response had to be implemented "on the spot," and many organizations would have benefited if a COOP had been in place.
  - Under Florida law, residential health care facilities are required to have comprehensive emergency plans that include facility evacuation. During 2004, several difficulties with these plans emerged, including the following:
    - Mutual aid facilities for sheltering residents/patients were close enough to also be impacted by the events
    - Transportation resources fell short
    - Facilities did not initiate evacuations in a timely manner
    - Many did not have standby power and were severely affected by the prolonged power outage
    - County and municipal management of and assistance to these facilities was more resource intensive than anticipated
  - Source: 2004 Hurricane Season "After Action Report" Lessons Learned Regarding Improved County and Municipal Hurricane Emergency Procedures (Volusia County, FL), June 2005.

Charley/Frances/Ivan/Jeanne

- **Evacuation Operations** G
  - In spite of lengthy delays, we [Mississippi] consider the evacuation a success because 10 hours prior to Ivan's landfall, traffic counts had fallen to below normal levels.
  - Better coordination required with law enforcement along evacuation routes
  - There is currently no reliable and accurate regional or national system to monitor real-time traffic counts along major evacuation routes (Data required to prioritize routes and open shelters)
  - Source: Mississippi Emergency Management Agency, Hurricane Ivan After Action Report, December 2004.
  - Generally most individuals felt the evacuations went well, many acknowledged several difficulties regarding the reentry into evacuated areas. The reentry process is one clearly requiring inter-jurisdictional and inter-organizational coordination and cooperation. Indications of difficulties during the 2004 season with the reentry process included:
    - Evacuees being allowed to return to areas with significant damages
    - Shelterees, including people with special needs, being released to damaged homes without power, but not allowed back into shelters
    - Sudden, and for some, unexpected decisions to de-activate shelters
    - Difficulties in consolidation of shelters
    - Managing the reentry processes and unique difficulties, e.g., the elderly, homeless, transportation resources, untimely closing of government offices, and similar
    - Lack of effective coordination among separate jurisdictions of actions allowing reentry and imposing curfews
  - Source: 2004 Hurricane Season "After Action Report" Lessons Learned Regarding Improved County and Municipal Hurricane Emergency Procedures (Volusia County, FL), June 2005.

- **Early Warning** G
  - Early warning and public notification process provided by the national weather service worked well
  - Source: Florida Department of Health, Office of Inspector General, 2004 Hurricane Season After Action Report, March 2005.

Charley/Frances/Ivan/Jeanne

- **Authorities**
  - No assessment data found for this area
- **Decision Processes**
  - No assessment data found for this area
- **Communications** (R)
  - Communications between field teams, Special Needs Shelters and local emergency operation centers were poor to non-existent in some counties (satellite phones and 800 MHz radio phones were used on a limited basis)
  - Source: Florida Department of Health, Office of Inspector General, 2004 Hurricane Season After Action Report, March 2005.
- **Situational Awareness** (Y)
  - Logistics teams struggled with the Tracker system used to request disaster assistance and track responses. Tracker was the funnel through which all mission requests were registered, but fraught with duplicative entries, and confusing status updates.
  - The coordination of the need and resources was problematic throughout the response to Ivan. Contributing factors included the shear level of devastation to the transportation infrastructure, inoperable communication systems and the inability of the Tracker database to generate useful reports. (Hurricane Ivan Annex)
  - Problems with accountability and control of stockpiles at logistics staging areas.
  - Source: Florida Department of Health, Office of Inspector General, 2004 Hurricane Season After Action Report, March 2005.
- **Civil Order**
  - No assessment data found for this area
- **Training** (Y)
  - The Incident Management Teams in Florida were not sufficiently trained in the use of the Incident Command System (ICS) and no ICS-based exercises had occurred (Hurricane Ivan Annex)
  - Logistics teams had no training with the Tracker system used to request disaster assistance
  - Source: Florida Department of Health, Office of Inspector General, 2004 Hurricane Season After Action Report, March 2005.

Charley/Frances/Ivan/Jeanne

- **Search & Rescue Ops**
  - No assessment data found for this area
- **Command & Control** (Y)
  - "Overhead teams" were deployed to forward areas to augment leadership when communications were degraded. The OTs created some confusion in effected counties.
  - The role of the Emergency Coordination Officer versus the Incident Commander must be reviewed and clarified
  - The emergency management relationship of the Deputy Secretaries and the Division Directors with the Incident Commander and the Incident Management requires clarification and formalized in policy
  - Source: Florida Department of Health, Office of Inspector General, 2004 Hurricane Season After Action Report, March 2005.
  - Lack of clear and timely guidance from local to state law enforcement resulted in confusion and lack of clearly defined expectations.
  - EM 2000 (message handling system) was not utilized properly during the response to Hurricane Ivan
  - Poor coordination between the State Emergency Response team and the State Emergency Operations Center
  - Source: Mississippi Emergency Management Agency, Hurricane Ivan After Action Report, December 2004
- **Mass Care** (R)

9/11/2001 Attacks

- **Federal Plans** (R)
  - "The civilian and military defenders of the nation's airspace—FAA and NORAD—were unprepared for the attacks launched against them. Given that lack of preparedness, they attempted and failed to improvise an effective homeland defense against an unprecedented challenge."
  - "Congress gave little guidance to executive branch agencies on terrorism, did not reform in any significant way to meet the threat…"
  - "The DoD and its oversight committees should regularly assess the adequacy of NORTHCOM, and by the DHS. They must have clear delineation of roles, planning to defend against military threats to the homeland."
- **State/Local Plans**
  - No authoritative assessment data found for this area
- **Evacuation Operations**
  - No authoritative assessment data found for this area
- **Early Warning**
  - No authoritative assessment data found for this area
- **Authorities** (R)
  - "The U.S.government did not find a way of pooling intelligence.... limited capacity to share information both internally and externally, insufficient training, perceived legal barriers to sharing information, and inadequate resources."
  - "Yet the Terrorist Threat Integration Center, while it has primary responsibility for terrorism analysis, is formally proscribed from having any oversight or operational authority and is not part of any operational entity, other than reporting to the director of central intelligence."

9/11/2001 Attacks

- **Decision Processes** (R)
  - "It is possible that NORAD commanders would have ordered a shootdown in the absence of the authorization communicated by the Vice President, but given the gravity of the decision to shootdown a commercial airliner, and NORAD's caution that a mistake not be made, we view this possibility as unlikely."
  - "Too many agencies now have an opportunity to say no to change. The National Intelligence Director should participate in an NSC executive committee that can resolve differences in priorities among the agencies and bring the major disputes to the president for decision."

- **Communications** (R)
  - "The emergency response effort escalated with the crash of United 175 into the South Tower. With that escalation, communications as well as command and control became increasingly critical and increasingly difficult."
  - "...the Pentagon response encountered difficulties that echo those experienced in New York... there were significant problems with both self-dispatching and communications... Almost all aspects of communications continue to be problematic, from initial notification to tactical operations."

- **Situational Awareness**
  - No authoritative assessment data found for this area

- **Civil Order**
  - No authoritative assessment data found for this area

- **Training**
  - No authoritative assessment data found for this area

9/11/2001 Attacks

- **Search & Rescue Ops**
  - No authoritative assessment data found for this area

- **Command & Control** (R)
  - "For a unified incident management system to succeed, each participant must have command and control of its own units and adequate internal communications. This was not always the case at the WTC on 9/11."
  - "…none of the information conveyed in the White House video teleconference, at least in the first hour, was being passed to the NMCC."
  - "We found no evidence that, at this critical time, NORAD's top commanders, in Florida or Cheyenne Mountain, coordinated with their counterparts at FAA headquarters to improve awareness and organize a common response."
  - "The emergency response effort escalated with the crash of United 175 into the South Tower. With that escalation, communications as well as command and control became increasingly critical and increasingly difficult."

- **Mass Care**
  - No authoritative assessment data found for this area